THE BULLETIN

of the

AMERICAN HOSPITAL ASSOCIATION

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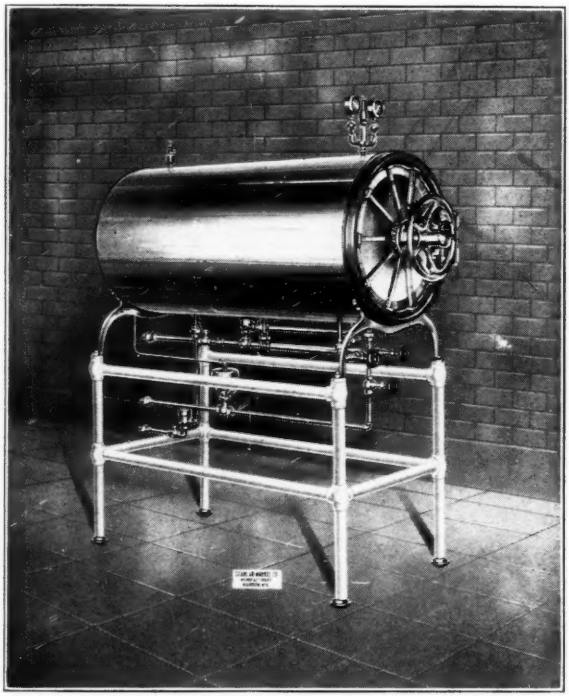
Eugene S. Gilmore
1867–1931

Vol. V OCTOBER, 1931 No. 10



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VOLUME V OCTOBER, 1931 NUMBER 10

The BULLETIN

of the

AMERICAN HOSPITAL ASSOCIATION

Incorporated

A monthly official publication devoted to the discussion of Association affairs and to subjects of interest to hospitals and allied institutions.

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Editorial and General Offices

Eighteen East Division Street, Chicago, Illinois

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VOL. V THE BULLETIN OF THE AMERICAN HOSPITAL ASSOCIATION No. 10

Editor, BERT W. CALDWELL, M.D., *Executive Secretary.*

Published monthly at 701 South La Salle St., Chicago, Ill.

Executive, Editorial, and Business Offices, AMERICAN HOSPITAL ASSOCIATION, 18 East Division St., Chicago, Ill.

Entered as second class matter March 19, 1930, at post office at Chicago, Illinois, under the Act of March 3, 1879.

Subscription rate, $2.00 a year. *(Foreign postage extra.)*

Printed in U. S. A.

Gilmore—
The Well Loved

While sitting at his desk in Wesley Memorial Hospital, where for a quarter of a century he had spent his life, death came to a dean of hospital superintendents, Eugene S. Gilmore. He passed away as silently and as softly as if he had fallen asleep, and while doing the work which had been intrusted to him for so many years.

Few people in any endeavor were as well known and loved as E. S. Gilmore. He came to Wesley Memorial Hospital in 1908, from the University Hospital at Ann Arbor, Michigan, where he had been superintendent for the nine years previous. He helped Wesley Hospital to grow from a small hospital into an institution which is one of Chicago's finest possessions. As he was kindly in his relations to his fellows, courteous and considerate toward them, warm in his friendships, so was he in Wesley Hospital. His welcome in its wards, his interest in patients, physicians, and nurses, built up a tradition in Wesley. It was a "human" hospital, where the patient was made to feel at home.

He visited every patient in his hospital each day and his visits were like benedictions to those who were being brought back to health. The finest tributes that have been paid him were those spoken by the patients who knew and loved him as a brother.

He gave far more to the hospital field than he received from it. Hundreds of hospitals, particularly in the Middle West, came to him for advice and counsel and were always benefited. His work among the church hospitals was outstanding.

He was a past president and, at the time of his death, the senior trustee of the American Hospital Association. He was one of its charter members. He was unfailing in his devotion to its interests.

He was born at St. Cloud, Minnesota, April 19, 1867. He died September 12, 1931. He leaves a widow, Mrs. Charlotte Clark Gilmore, a daughter, Mrs. Bertha Mae Davis, and a legion of friends to mourn him.

And so passes one of the finest exemplifications of a hospital administrator—a useful citizen, a generous friend, a kindly, courteous, Christian gentleman.

LEWIS A. SEXTON, M.D.
President, American Hospital Association

PRESIDENTIAL ADDRESS

By Lewis A. Sexton, M.D.
Superintendent, Hartford Hospital, Hartford, Connecticut

This convention marks the close of my official relations with this Association. I am deeply grateful for the confidence you have imposed in me and to Dr. Caldwell and the executive force for their splendid assistance and coöperation. My connections, however, with the affairs of the association shall continue with increased interest for this is the only instrument we have that can reach all of the people in America in their time of need. It is a pleasure and a privilege to be allowed to convene this the thirty-third convention of the American Hospital Association here in Toronto. Canada has, from the inception of this Association, been active in its participation and contributed many of the leaders who have made the Association what it is today, and it is fitting therefore that from time to time the annual convention should be held somewhere in the Dominion. We are deeply indebted to Mr. Henry A. Rowland and the other members of the local committee for the extensive preparations that have been made for our reception. There is no end to the detail involved in this preparation, and that every phase of the subject has had the careful consideration of this committee will be apparent to you long before this convention comes to a close. We have prepared for you a program devoid of threadbare topics, to be rendered by authorities than which there are no better. We sincerely trust that you will all enter into the spirit of the meetings and join in the discussions with the same interest that your speakers have manifested in the preparation of their papers.

During the past year the association has been able to make progress in many directions, notwithstanding the conditions. Probably the outstanding achievement has been the inspection by experts of every hospital in the United States that desired it, with a view to reducing the hazards both to life and property by fire. The National Board of Fire Underwriters has assured us that they regard it as a great privilege to be able to render this service. This inspection service which has been done by the 36 associated inspection bureaus has been extended to about 3,500 hospitals and has cost the National Board of Fire Underwriters $300,000. An appreciable reduction in fire insurance rates has been effected in every instance where their recommendations have been put into effect.

If all of the recommendations of the former Presidents of this Association had been put into effect there would remain nothing to be done, but since they have not I should like to call your attention to certain needed changes.

THE HOSPITAL OF THE FUTURE

The hospital of the future must reckon on the care of an entirely different type of patient and work. The present development of hospitals represents a long period of evolution. Hospitals for the first fifty or seventy-five years of their existence in this country were institutions of last resort, and none but the indigent thought of seeking their services. Take for example fifty years ago: At that time there were only 157 hospitals in America with a bed capacity of 35,453. Today we have more than 7,000 hospitals with a bed capacity of more than a million. Gradually the advantages to the patient, to the doctor, and to the community became generally recognized; hence step by step we have come all the way from these institutions which we do not care to contemplate to veritable palaces equipped with all the luxuries and conveniences that are to be found in the homes of the well-to-do. The type of patient cared for and the character of the work done by hospitals have undergone as great a change during this period as have the construction and accommodations for their care. Many of us can remember when our medical wards were filled with typhoid and malaria, and smallpox was by no means a rare avis; when every city of any size had its own contagious hospital. How changed these conditions are! We have barely enough typhoid now to demonstrate to our interns and nurses what the disease is like. Smallpox, as a scourge, is unknown. Diphtheria is fast disappearing. Only a little while ago we read that the diphtheria hospital in Philadelphia had been closed because there was no further need for it as such. To have arrived at these conditions, however, has not been a simple process. It has meant the spending of endless time and large sums of money in the innumerable projects that are presented year after year, many of which have gone into the discard. It has been only by this long process of elimination that the hospitals and the medical profession have been able to crystallize the many useful and efficient methods that are available for our patients today. So far, this is the only known method of progress. One has only to look back upon the years spent in patient research by every scientist worthy of the name to realize that worth-while developments and discoveries are not haphazard, but are the fruits of long years of untiring effort, often under adverse conditions, with no hope of compensation beyond their contribution to the welfare of mankind. These miraculous changes, which mean the saving of countless lives each year, have crept upon us almost unperceived. That other and greater changes are due to come is a foregone conclusion. What is the answer? Preventive medicine. Year after year the medical profession has made its contribution to improve the conditions which influence the welfare of our

people. Our public health program is world-wide, penetrating each year further into the rural districts and seeking out the persons it may help and the conditions it may relieve.

This brings us to the part that hospitals have played and must continue to play in the elimination of these conditions that are such serious factors in our national life: It is safe to say that only a fractional part of this great work could have been accomplished without the aid of our general hospitals in supplying the material and facilities for this work. There is no more shining example in all of these accomplishments than is to be found right here in Toronto. Not that we think for a moment that all of our hospitals and medical schools have Bantings within their walls. We have not, but each new discovery brings us that much nearer a solution for all of these problems for it gives us another method of approach, and there are too many unsolved problems for us not to place within the reach of our staffs whatever means and facilities we can afford. Year after year we see these conveniences for our staffs improved, and one of the greatest powers behind this movement is the American College of Surgeons. The world will probably never have a due appreciation of what Dr. MacEachern has done along these lines. The trend of future development will continue along the lines of medical centers. Good roads and automobiles will continue to render untenable much of the development in the rural districts that would otherwise be necessary.

The policy of hospitals providing suitable buildings for the offices of their staffs in connection with the hospitals will lend itself to many institutions in need of this additional income. This line of development, upon which we cannot elaborate at this time, possesses many advantages to all concerned.

FINANCING THE ASSOCIATION

The future usefulness of the Association could be greatly enhanced if it had certain fixed income upon which it could depend from year to year. The income from present sources is barely sufficient to meet the actual running expenses of the Association.

The present condition does not permit of any expansion in the many useful directions to which it is obvious that the Association should lend itself. This probably is not the time to expect private philanthropy to interest itself in this far-reaching project. The great amount of good which the Association could accomplish with a fixed endowment by aiding all the hospitals throughout the country, and thus indirectly all the patients who enter our institutions, creates a possibility for rendering service to more people than any one opportunity ever offered before. The securing of such an endowment will depend largely upon what the Association proposes

to do. If we can develop and offer to the people of America a program that can demonstrate its usefulness, and at the same time give the necessary assurances that whatever funds may be created for this purpose will be properly administered, private philanthropy can undoubtedly be interested in our behalf. People of large means are continually seeking an outlet for their savings where they can accomplish the greatest amount of good. Financing a constructive program for a broad expansion of the future usefulness of this Association is certainly one of the world's greatest opportunities. At least 25 per cent of the 12,000,000 people who enter our hospitals each year are without funds. To be able to render a definite service to these 3,000,000 unfortunates can be done in no other way and through no other agency that we know of except the American Hospital Association.

Relative to additional hospital accommodations, it is regrettable that the occupancy of our hospital beds has continued to decrease. A survey has shown that 35 per cent of all the beds in the hospitals of this country were unoccupied last year. This clearly defines the necessity for thorough surveys of community needs before spending more of the people's money for new construction for either civil or military purposes. There exists a committee of this Association which stands ready to coöperate with the national government on the problem of additional hospital accommodations for world war veterans. Apparently neither the bureau nor the politicians who have the final decision in matters of this kind have the courage to oppose any measure once recommended for the veteran's benefit. Since this is the case it is the duty of every member of this Association to stimulate within the veterans themselves a protest against this duplication and overlapping of services which are now available in our general hospitals. That a service exists which is the equal of that supplied by the veterans' hospitals and can be had at a much reduced cost to the government must be apparent to anyone who cares to go into it.

The much discussed question of puerperal mortality in American hospitals is one that should claim the attention of every institution caring for these cases. Either we are doing a very poor piece of work in our care of this type of case or all the countries of Europe are accumulating a great mass of unreliable statistics. It is highly probable also that these statistics in our own hospitals are much to blame for the glaring discrepancies between the mortality rates in European and in American institutions. There are many complications that actually cause the deaths in these cases that are in no way related to puerperal septicemia. This is the only type of case that we treat where our results are not worthy of emulation.

PRESIDENTIAL ADDRESS

THE PRESIDENT'S ADDRESS

Following the precedent of similar organizations, in 1919 the Association adopted the plan of electing the President one year prior to the time he assumes the duties of his office, this in order that he may familiarize himself with the organization and workings of the Association. However, no change was made in the time for the President's address, which comes at the opening of the convention when he retires. It would seem to me advisable for the President-elect to deliver his address at the time he takes office in order that he may outline his policies and seek the cooperation of the members in the carrying out of the plans which he may have formulated during the previous year. This will bring him before the convention in an official capacity, give him a more definite contact with the members, upon whom he must rely for the execution of his policies, and lend an added dignity and responsibility to his position.

A HOSPITAL DIRECTORY

A directory of the hospitals in the United States and Canada has been issued from time to time by some of our kindred organizations, but so far this Association has never attempted such a contribution to its membership. A complete and authentic description of every hospital in America with its governing body should not only be available for the use of the executive offices of the Association but should be a part of the Association's annual contribution to the hospital field. The probabilities are that it will be necessary to revise this directory semi-annually in order to keep track of some of our superintendents.

THE NURSING PROBLEM

Tied up inseparably with the work and development of hospitals is the nursing profession. They have come down through the years, each dependent upon the other. There exists in the minds of some people an idea that the nursing profession can be divorced from the hospitals. There is a wide difference between the training and the education of a nurse from a pedagogic point of view. Those of us upon whom the final responsibility rests for the nursing of the patients and the support of the schools find ourselves wondering what the nurse of the future will be like and just where in the scheme of things her place will be. Each year sees its additions to the curriculi of our schools until they are bulging with desirable courses for a general education but squeezing out year after year the essentials upon which the profession was founded. Education—yes, by all means—but education and training that will fit our people for their greatest sphere of usefulness. There has grown up among us a feeling that unless we train our nurses out of the menial sphere of caring

for the sick, we are not doing our duty. I am old-fashioned enough to believe that you can educate a people beyond their sphere of usefulness. Not a few of our institutions of higher learning think that unless a nurse has her Ph.D. degree she is no longer worthy of her place in the profession. I want to tell you that if we all follow the lines laid down for our training schools by these institutions for the next 25 years, they will all be Ph.D.'s, and there will be no one blessed with a sufficient amount of humility to do the actual nursing necessary for the recovery of our patients. More than one empire has toppled because of the weight of its own greatness. These conditions may rightfully apply to the old established schools and hospitals in our urban centers, but we must remember that 75 per cent of our hospitals have less than 100 beds each, and are located in the rural districts where the suffering is more acute, the need for nurses just as great, and the conditions for training them much less propitious than many of us imagine. To those who are familiar with the conditions in the rural districts and the small hospitals no warning is necessary, but to the others let me leave one thought, and that is, a plea for the training of nurses who enter the profession for the love of the work and the good they may do: nurses who are willing to give of themselves to make the long, weary hours of illness less irksome; nurses the sight of whom is an inspiration and a joy to all who may be unfortunate enough to need their services. Theory in a nurse's training is desirable and essential, but the man or woman whose needs call for that gentle touch that soothes an aching brow cares little for a knowledge of the solubility of salicylic acid or the atomic weight of sulphur.

HEALTH INSURANCE, OR STATE MEDICINE

In looking ahead one cannot avoid the consideration of some type of state medicine. There are so many sides to a question which involves the welfare of all the common people that I shall not go at great length into the advantages it may offer or the disadvantages it may possess. The idea is by no means new or novel. Dr. Winford H. Smith, in his presidential address 15 years ago, said, "Health insurance is doubtless in the minds of most of us a thing to be desired. In any event it will surely be with us before many years." During and immediately following the World War there was considerable agitation over the question. With the coming of the following years of prosperity it made little progress, but it is again to the fore and has undoubtedly come to stay. It is of sufficient moment to be given a prominent place on our program. Dr. Harvey Agnew, director of hospital activities of the Canadian Medical Association, with other authorities will devote one entire period to a general discussion of the subject. Any development that comes along these lines must come

through and under the direction of the medical profession. Any system that comes as a result of the efforts of political groups and members of the profession that have not succeeded under our present régime will not succeed. Contrary to the generally accepted idea that this must exist purely for the indigent, it must partake of an inclusive form that deals first with the medical needs of the community and later with the varying financial status of those involved. Laws governing this question have existed sufficiently long in several of the Canadian provinces to give us a very definite and workable knowledge of what seems best to do. We do not have to look to Europe and the Dominion, however, for all of our information as sixteen of our states have passed laws necessary to provide financial aid to the aged and indigent. There is no reason to expect that private philanthropy is going to continue to carry the enormous load it has carried in the past. The charge for those who cannot pay anything and those who can pay for only a part of the cost of their medical and hospital care is just as legitimate a burden for taxation as our schools, police, and fire protection. Whatever comes in the way of legislation affecting this important subject, the hospital must be paid the full cost of the care of this service.

Just a word in conclusion on the economic status of the country. Depressions manifest themselves in many ways and are undoubtedly responsible for the 35 per cent of unoccupied beds in our hospitals last year. That cannot mean that America is over-hospitalized—that we have allowed the pendulum to swing too far in the provision of beds for the sick. The type of accommodation may not suit the economic condition of the country, but the principle behind this provision is manifestly sound. History cannot but repeat itself. We all know that sooner or later prosperous times will again be in evidence; that these beds which have been without occupants for a year will be needed. Periods of depression are not without their value to us all. They teach us the correct values of the huge sums of money intrusted to our care. When the purchasing power of a dollar is only fifty cents and we have plenty of them, they command very little respect. When that power has reached the level it occupies today and we do not know where the next dollar is coming from, then the wild orgy of spending which has swept over the country for the past few years suddenly comes to an end. Sober judgment and a revision of our assets and perspectives sets us down to a realization of what it is all about. This enforced revision has sent many individuals and institutions into a tail-spin, the consequences of which have not been pleasant to contemplate, but nothing short of what we have gone, and are going, through could ever have checked the world in the speed at which it was going.

No catastrophe has ever visited a country or a community that did not leave it better than it found it. We wince at seeing our buildings and plans laid waste, but the new structures that rise out of the ruins always come up stronger and better than those that went down. Can anyone question that we will all be better administrators for having gone through this test of poverty and depleted incomes? Not for a second. There will be certain individuals and institutions that will not survive the ordeal. I do not know of any saying that is more applicable to the hospital field than the one used by Calvin Coolidge when he said, "The scraping of the hull of a ship of state is a trying ordeal for the barnacles." The recovery from this condition cannot be effected by any one community or country alone. A condition that has been world-wide in its effects must be remedied by the combined efforts of all concerned. We are inclined to the opinion, however, that this country with its optimistic, far-sighted policies and its fair dealings with all the peoples of the world will be the first to see the rays of a brighter day, that is, the emanation of a people made happy by the return of employment and incomes that are commensurate with the standards of our American homes. The foundation for this hope is not original with us or our age. It is a heritage that has come down to us through the centuries from the founders of this country, from our ancestors whose lives were a continual struggle, who succeeded in the face of conditions that would make the times we are now going through look sick by comparison. These experiences have taught us that no cause based upon the care of the sick and the afflicted can ever be checked by financial depressions or business failures. Our work, the healing of the sick, is the work of God; we are merely the instruments in his hands through which these ends may be attained. Periods of depression may impede our progress, but a calling as old as the art of healing will go on through the ages. It remains for us to give to our work the best that is in us, to see that the torch that we pass to the next generation burns a little brighter than when it came to us.

THE HOSPITAL TRUSTEE AND HIS HOSPITAL

By JOHN FERGUSON, M.A., M.D., F.R.C.P.C.
President, Ontario Hospital Association

THE NOBLEST WORK that any man or woman can engage in is that of bringing aid to another who is in distress of body or mind, or laid low by sickness or injury. The story of the Good Samaritan is well nigh two thousand years old, but it has lost none of its inspiring power, for it is of divine origin.

"For I was an-hungered, and ye gave me meat; I was thirsty, and ye gave me drink; I was a stranger, and ye took me in; naked, and ye clothed me; I was sick, and ye visited me." These words of the Great Teacher and Healer of the bodies and souls of men constitute the charter for all altruistic works, and of such, there is none to rival that of the erection and maintenance of hospitals for the care of the sick.

Samuel Johnson uttered a great truth when he said that the truest test of civilization is the provision made for the care of the sick poor. When one looks abroad over the world the truth of this saying becomes very real and apparent. Just as civilization advances and the moral sense rises to a high level, one finds that the institutions for the care of the sick and injured increase in numbers, and ever assume grander proportions. Compare the United States, Canada, Great Britain, France, and Germany, with vast regions of Africa, Asia, Eastern Europe, and South America, and the words of Johnson loom large before our vision.

Every service rises in value as it calls for sacrifice. You know the story of a certain ruler who assured the Good Master that he had kept the Commandments from his youth up? He was promptly told that such was not adequate service, for he must sell his goods and give to the poor.

From my knowledge of hospital trustees I feel bold in saying that the story is one of continual sacrifice, of devotion to an ideal, of patient pursuit of a noble objective, and of faith in the best elements in human nature. Trustees have given freely of their time, their intellect, their sympathy, and their material means in the building and maintaining of the hospitals for the benefit of others. The only dividend they receive for all this labor and giving is the consciousness of having done good to their fellowman.

When one recalls the achievements of hospital trustees, the words *opera nobilissima* can be with confidence pronounced upon them. The

thousands of hospitals that dot civilized countries, costing hundreds of millions of dollars, the keen business judgment displayed in their management, the skill and tact required in securing the trained surgeons, physicians, and specialists, and the providing of nursing services for the care of patients stand as enduring monuments to the efforts put forth by boards of hospital trustees. These achievements are noble monuments and more lasting than those engraved on brass or chiseled in stone.

Hospitals touch humanity from many angles. They are far more than places of retreat for the sick and injured. They are great and important centers of education. They furnish the medical profession with the facilities for doing the best for their patients. They train an army of women for the most ideal form of service to humanity. They educate the people to be charitable by setting up before them examples worthy of being followed. They are centers, moreover, for the spreading of the laws of health, for doctors, nurses, patients, and visitors have all learned much about the laws of sanitation and the prevention of disease through their connection with the hospital of their district, even though it be one of only ten beds located in a little hamlet.

Hospital work is a most valuable civilizer. Those who become interested in such work find their own nature refined thereby. Members of the medical profession are brought together and learn the valuable lessons of coöperation and placing trust in each other. The people are taught the value of human life, and what a beneficent thing it is to take part in its prolongation and in the alleviation of suffering. Schiller, the great poet, gave the world these words: "Every harsh thought or cruel deed stamps upon the countenance something that repels, whereas every kindly thought and generous deed makes the most homely face look beautiful."

Hospitals, and all those who take an interest in their maintenance and working, are dealing with the most sacred of all things—human life. Tennyson was right when in his "In Memoriam" he sang—

> "Life is not an idle ore,
> But iron dug from central gloom,
> And heated hot with burning fears,
> And dip't in bath of hissing tears,
> And batter'd with the shocks of doom
> To shape and use."

Those who are engaged in hospital work realize in a very clear way the meaning of these words. They learn that life is not an idle or worthless thing. They realize how it may be dug up from sorrow and gloom and made joyous. They are called upon ofttimes to witness the burning fears of

patients and their friends, they see how tears try to drown these fears, and they see that all these influences may reconstruct the nature of both patient and attendant, and remodel it into better shape and use. When one keeps in mind the vast amount of sickness ever present in our midst, could any man or woman have a more perfect motto for their life's aim than the words of Virgil—*Miseris succurrere disco*—I learn to aid the suffering?

The financing of hospitals places upon the shoulders of trustees many and heavy responsibilities. Patients should be made comfortable and given suitable diets and the medical men must have at their disposal the best form of equipment. But to do this demands the outlay of large sums of money. To meet these demands the trustees have several sources of revenue. First of all comes the money collected from those who can pay for their hospital care and their professional attendance. In the next place the trustees may appeal to the generosity of citizens to make gifts of money or of goods. There are the funds that may be secured through the efforts of social organizations in holding bazaars, concerts, teas, etc. Lastly, there is what the poor patients may be able to contribute toward their hospital care. This is frequently far below the cost of maintenance. This contribution may be made for these patients by friends, societies, or public bodies, such as cities, towns, districts, states, or provinces. With regard to this class of patient, these public bodies should be willing to bear the full cost of maintenance, and thus avoid the creation of deficits that must be met from some other source. It is here that I desire to place on record my protest against putting a surtax upon those who can pay their own way to meet these deficits. This is not just, but there can be no objection to a wealthy patron donating money by his, or her, good-will. The care of the indigent sick should be the duty of the people as a whole in their organized capacity. Until this view is realized and put into operation, the best results cannot be obtained.

One of the problems constantly confronting the trustees of hospitals is the one of supplying suitable accommodation at reasonable cost to those of moderate means, or who receive moderate salaries. It would seem impossible to cut down that cost on foods, dressings, drugs, beds, utensils, laboratory or x-ray equipment, or nursing. All these seem to belong to the uncontrollable expenditures in the running of hospitals. It seems, then, that about the only way to reduce the cost to the patients is in the type of hospital building and the arrangement of the wards. In the majority of hospitals, the construction should be simple, and all non-essential details omitted. The wards should be small but well ventilated, and for the middle classes, there should be an ample number of medium-

sized, semi-private wards. Considerable saving might be effected by having a nurse "special" two or more patients. These are some of the pressing questions demanding study and the best answers possible.

In Canada there are about 900 hospitals, valued at some $241,000,000. These furnish 72,000 beds and the annual maintenance cost is $50,000,000. On a basis of population this would give for the United States about 11,000 hospitals with some 900,000 beds, and an annual maintenance cost of at least $600,000,000. The capital value would not fall under $3,000,000,000. Such figures as these proclaim far more eloquently than lies in the power of words the work that hospital trustees have accomplished. Every new discovery in medical science makes new demands upon the hospital treasury. But there must be no looking back, like Lot's wife! In hospital activities, the words of Lowell are applicable.

"New occasions teach new duties,
Time makes former good uncouth,
They must onward still, and upward,
Who would keep abreast of truth."

In the interest of the patients and medical science, we must keep abreast of the most modern views.

In all the range of history there are no more instructive pages than those which give an account of the rise, growth, and improvement of hospitals in all civilized countries. If ever the saying "truth is stranger than fiction" finds verification, it is surely to be found in the history of the evolution of hospitals. As nursing had its origin in mother love, so the first hospitals were the simple homes of the people which gave shelter and care to the sick. From these, in ancient times, there arose inns, and hostels for the reception of the sick. One might mention the hospital founded in 370 A. D. by Bishop Basil, at Cesarea. It was like a small city. In 350 A. D. St. Ephrem founded an emergency hospital at Edessa, to care for plague-stricken patients. During subsequent centuries and in various places hospitals were founded by Fabiola, Bishop Masona, and others. The Hôtel-Dieu in Lyon, 542, the Hôtel-Dieu of Paris, 651, and the Santo Espirito in Rome, 717, are still in operation. During the middle ages, when leprosy and syphilis were prevalent in Europe, there were many lazar houses established.

Compare these hospitals, the nursing of those bygone centuries, and the medical and surgical practices then prevailing with our own modern hospitals, present day nursing, the trained physician, and the white-robed surgeon. One must be profoundly impressed with the progress that has been made. To reach our present status there was groping, guessing, empiricism, but it has ever been true in all things human, *per dubitandum*

ad veritatem pervenimus—through doubting and groping we have arrived at the truth.

I have reserved for a separate paragraph a few words on those patients from whom hospitals receive no compensation for their care. They are brought to the hospitals sick or injured, and they have neither money nor friends, and they are disowned by every city, town, county, state, or province. Their physical condition demands immediate care, such as hospitals alone can give, and of course they are admitted. There is no reason that can be advanced why the hospitals should be saddled with the costly care of such cases. Here is a problem for the trustees of all hospitals. A united effort should be made to have the cost of caring for such patients borne by the public, as the majority of hospitals have no endowments to fall back upon, and are working on very narrow financial resources, and sometimes on bank overdrafts, or borrowed money.

Wherever a hospital is located there develops an atmosphere of philanthropy and altruism. Auxiliary societies spring up around the hospital, having as their objective to befriend the friendless and to bring comforts to the suffering and hope to the despairing. Those who engage in such work are not only brightening the lives of others, but they are ennobling their own. "Sow a thought," said Boardman, "and reap an act; sow an act, and reap a habit; sow a habit, and reap a character; sow a character, and reap a destiny." In the case of hospitals the sowing and the reaping are of the highest type. "Verily I say unto you, inasmuch as ye have done it unto one of the least of these my brethren, ye have done it unto Me"; and you all know who said those words.

That there may be no doubt as to who is a brother, read the parable of the Good Samaritan and the wounded traveler. *Deum nulla re proprius veneramur quam hominibus salutem dando*—in no way can we more fittingly reverence the Diety, than by giving health to mankind. Permit me to quote a few lines from Cowper:

> "True Charity, a plant divinely nurs'd,
> Fed by the love from which it rose at first,
> Thrives against hope, and, in the rudest scene,
> Storms but enliven its unfading green;
> Exuberant is the shadow it supplies,
> Its fruit on earth, its growth above the skies."

PAUL H. FESLER

To the Members of the American Hospital Association,

Greeting:

The program of the thirty-third annual convention will be remembered as a complete and exhaustive discussion of practical hospital problems.

During the past two years economic discussions have held the center of the stage. The capacities of tax-supported hospitals have been well nigh exhausted in providing care for indigent patients. Private hospitals have suffered for lack of revenue, both from philanthropic sources, and from patients who have heretofore been able to pay for hospital care. It is imperative that the business of the hospital be given close attention.

My appeal to our hospitals is that while we give due consideration to these economic matters we do not compromise our ideals of service. We must never sacrifice these ideals.

In order to accomplish this end, it is important that all associations of physicians, hospitals, nurses, and our allied groups coöperate in a program of education of the public to the end that it will insist upon laws and regulations for the best interests of all patients in our hospitals; that it will endorse financial support to both public and private institutions serving the community. Our members should unite in developing such a program.

Your Association desires above all things to be of real service to its members. Its facilities are at your disposal. Its Library, its Service Bureau, the Association's TRANSACTIONS *and* THE BULLETIN *are always available. Your counsel and constructive criticism is not only welcome but solicited.*

The officers, board of trustees, and committees will endeavor to develop in the best possible way the Association's usefulness to its members as well as to the patients in our hospitals.

Our members are urged to attend the meeting of their city, state, and national hospital associations and to coöperate in all activities having to do with the health of the community and its welfare.

PAUL H. FESLER, *President-elect*

THE RELATION OF THE HOSPITAL TO COMMUNITY HEALTH

By W. S. RANKIN, M.D.
Director, Hospital Section, The Duke Endowment, Charlotte, North Carolina

THE STATISTICAL WITNESS

THE MOST STRIKING and tangible evidence of the improvement in the health of communities generally is the reduction in mortality rates that has occurred during the last 30 years. Death rates have declined with greater rapidity during that length of time than in any previous like period of time; moreover, the rate of decline will not be equalled, in all probability, in any future similar period. Contemporary with this period of falling death rates, both institutional medicine, as exemplified in the work of the general hospitals, and preventive medicine, as exemplified in the work of health departments, have had their great development. During the 30 years since 1900, according to a recent estimate by Dr. C. Rufus Rorem, the number of general hospitals has been multiplied four times and their beds three times. In this same period of 30 years the resources of health departments have very probably been increased almost a hundred-fold.

THE DIVISION OF HONORS

To generalize and say that modern medicine, attacking disease from both sides, cure and prevention, has brought about this reduction of death rates is to assume an uncontested position; but to particularize, to attempt to apportion the honors between the two arms of medicine, cure and prevention, is to enter a no man's land. Nevertheless, someone with more time for the task than the writer and with greater dexterity in extracting the truth from tables of figures should undertake the rather interesting study, for the question involved is not merely academic; it lies at the very basis of an intelligent apportionment of funds between the work of general hospitals and that of health departments. With the idea of stimulating an interest in the direction of such a study, rather than of arriving at any well matured conclusion, the question is raised: Where falls the line—a dim, indefinite line, to be sure—between credit that belongs to the development of general hospitals and that which belongs to health departments for the reduction in mortality rates that has taken place between 1900 and 1928? On this question we turn for light to certain statistical tables.

SEVENTY-NINE PER CENT REDUCTION OF THE DEATH RATE

Referring first to Table I, it will be noted (1) that the general death rate declined from 1,755.0 deaths per 100,000 population in 1900 to an average

general death rate for the five-year period 1923-1927 of 1,192.1 deaths per 100,000 population, a decline of 32 per cent or 562.9 less deaths per 100,000 population for the average year in the five-year period than in 1900; (2) that 444.7 of the 562.9 deaths less for the average year in the five-year period, that is, 79 per cent of the total reduction, can be credited to nine groups of diseases and conditions, which include 44 of the 205 causes of death as found in the International List; and (3) when we turn to consider the major factors concerned in the reduction of deaths as shown in Table I, it appears that most of the credit must be assigned to measures primarily of a preventive rather than a curative nature, more to health departments than to general hospitals, which are more directly concerned with problems of diagnosis and treatment.

Particularizing with respect to the forces concerned in the reduction of the death rate for the nine conditions listed in Table I, we may consider them in order.

Tuberculosis.—An authority on this disease, who is superintendent of a large state sanatorium, in commenting upon the factors involved in the tremendous decrease in the death rate of tuberculosis during the last 30 years, says that the reduction is due very largely to popular education in regard to the prevention and cure of tuberculosis and the use of sanatoria for removing open cases from their families and associates and thereby preventing the infection of others; that in the treatment of the disease there has been some little improvement, especially in the handling of moderately advanced and far advanced cases, but that in general the marked decline in mortality from this disease is to be credited to measures primarily preventive rather than curative in their purpose and effect.

Diarrhea and enteritis.—A well known pediatrician, when asked to comment upon the remarkable decrease in the death rate from this disease of children, ascribes the credit for its reduction largely to measures of a preventive nature. He says: "I believe that most of the reduction in the death rate from diarrhea and enteritis has been due to public health activities rather than to medical activities. In hospital work, we have had some improvement in treatment due to transfusion and the giving of fluids, but I do not believe that there are enough hospitals which use these improved methods to affect the general rate. There has also been some improvement in the treatment of diarrhea and enteritis due to omission of massive doses of calomel and castor oil by many of the practitioners, but, as I said before, I believe that the major reduction has been due to public health activities."

Influenza and pneumonia.—The great reduction in the combined rate for influenza and pneumonia is difficult to account for. When one of the outstanding authorities in the United States on this disease was asked to

comment on this reduction, whether it could be due to changes in the diagnosis and classification of the disease, to decreased prevalence, to decreased virulence of the infection, or to improvements in treatment, he said: "There has undoubtedly been some improvement in treatment, but I doubt whether this is sufficient to account for any decrease in deaths as indicated by the figures you give." As to whether there has been a decrease in the prevalence of the disease or a decrease in the virulence of the infection within recent years, he would not venture to guess.

Diphtheria.—We all know that the 80 per cent reduction in the death rate from this disease is to be credited to the application of antitoxin, and, in recent years, to immunization against the disease, and bears no essential relation to the development of the general hospitals during the last 30 years.

Typhoid and paratyphoid fever.—Ninety-five per cent of the reduction here is due to sanitation, to the protection of water supplies, to more complete control over milk supplies, and to control measures over the fly. There has been, apparently, a reduction in the fatality rate of typhoid fever within the last 30 years, but that is more likely due to a decrease in the virulence of the infection than to improved methods of treatment.

Bronchitis and broncho-pneumonia.—The decline from 67.6 to 47.9 during the 27-year period has a relation to the decline in the combined death rates of measles and whooping cough from 24.6 in 1900 to 14.9 for the average year of the five-year period 1923-1927. Any improvement in the treatment of these associated diseases during the period under consideration has been of minor importance.

External causes.—Under this heading, deaths from violence, with suicide, homicide, and automobile accidents excluded, are recorded with a decline from 79.0 to 59.5 for the period under consideration. This decline is more closely associated with safety work, as sponsored by the National Safety Council, and with the influence of workmen's compensation laws than it is with improvements in the treatment of accidents, notwithstanding the fact that definite progress in this field of surgery has been achieved.

Malformations and diseases of early infancy.—The decline from 91.8 to 73.8 for the period of time under consideration is due, in all probability, more to the work of health departments as carried out through prenatal clinics than to better obstetrical practices. In this connection it is interesting and rather discouraging to note that the deaths from the complications of the puerperal stage, including puerperal fever, show practically no change in the 27-year period under consideration.

The common contagions.—The same authority on diseases of children previously referred to, in commenting on the decline in the combined death

rates from measles, whooping cough, and scarlet fever from 34.8 in 1900 to 17.7 for the average year of the five-year period 1923-1927, says: "I believe that the reduction in the mortality due to contagious diseases has been due almost entirely to public health activities; however, it is conceivable that the virulence of the organisms or viruses of the diseases has diminished, for in talking to older physicians I have frequently heard the statement that measles, scarlet fever, etc., are not as severe as in former years."

SOME ADDITIONAL REDUCTIONS

Table II is supplementary to Table I. It includes ten groups of diseases, 11 of the 205 international causes of death. It shows a combined reduction from 78.2 deaths per 100,000 population in 1900 to 34.7 deaths per 100,000 population for the average year of the five-year period from 1923 to 1927, a saving of 43.5 lives per 100,000 people, which is 7.7 per cent of the total reduction appearing in the preceding table, namely, 526.9 deaths less per 100,000 population. Adding the 7.7 per cent to the 79 per cent reduction in the preceding table, we have now accounted for 86.7 per cent of the reduction shown for the 27-year period.

Avoiding too much detail, we may comment briefly upon the reduced death rates of Table II. The reductions for dysentery, malaria, and smallpox may be credited largely to public health activities; the very satisfactory reduction for septicemia to the work of the National Safety Council and improved surgery; the reductions for tetanus and erysipelas go to surgery, but surgery largely of a preventive character; the reduction for rheumatism, in all probability, to better methods of diagnosis and cure, as these are related to focal infections.

SURGERY AND STATISTICS

Because surgery constitutes a large part of the work of the general hospital and because the general hospital originated very largely as a response to the demands of surgery, an examination of the changes in death rates of certain important surgical conditions may be of interest at this time. Fifteen surgical conditions are listed and the mortality rates for ten- and five-year periods are shown in Table III.

Some of the increases shown in Table III are due (1) to changes in the age grouping of the population, this accounting to some extent for the increased death rate from malignant tumors; (2) to new conditions of life, this accounting, for example, for the higher death rate from automobile accidents, diabetes, and probably to some extent for the higher death rate for cancer; and (3) to improvements in methods of diagnosis, this accounting for the increased number of deaths from such causes as calculi of the biliary and urinary tracts, gastric ulcer, and diseases of the thyroid.

A good deal of attention has been drawn to the fact that the death rate from appendicitis has increased during the last 30 years. The increase is only an apparent increase and is due to changes in the classification of deaths from peritonitis by the Bureau of the Census. Many deaths resulting from appendicitis were formerly not charged against appendicitis, but to peritonitis. Such deaths are now charged to appendicitis; hence the increase in the number of deaths from appendicitis from 9.7 to 15, and the corresponding decrease in deaths from peritonitis from 15.1 to 1.6 for the 27-year period under consideration.

QUESTION AND INCOMPLETE ANSWERS

This study is incomplete. Its implications are of far-reaching importance and call for more thorough treatment. May I leave it within sight, possibly within reach, of our Committee on Public Health Relations, and in leaving it for those who can pursue it with more patience and persistence than I have had for it, may I conclude by undertaking to indicate the direction of some of the answers to the question which this preliminary study suggests, to wit: Why is the statistical evidence of the benefits of curative medicine, especially as curative medicine has gone forward with the development of general hospitals during the past 30 years, so indefinite and limited as compared with the impressive evidence of the benefits which society has derived from measures primarily of a preventive character? Some of the answers that will occur to us are:

First, some of the 86.7 per cent reduction in the death rate shown in the tables is creditable to improvements in diagnosis and treatment and to the influences of the general hospital as it has developed during the last 30 years. Opinion would vary in its apportionment of credit for the reduction as between methods and agencies of a preventive nature on the one hand, and methods and agencies of a curative nature on the other hand. Possibly as much as 20 per cent of the reduction shown in Table I might be credited to better diagnosis and treatment.

Second, the effects of curative medicine and of hospital work is of a more diffusive character, as respects the 205 causes of death, than are the effects of preventive medicine. A city improves its water supply and the improvement is almost immediately reflected in a reduction of its typhoid death rate. A city pasteurizes its milk and its death rate from diarrhea and enteritis promptly goes down. A well organized attack on tuberculosis, based primarily on prevention, and carried forward for a quarter of a century, and the mortality rate from the disease is cut in half. Curative medicine, on the other hand, does not particularize, makes no well organized drives on any one sector, but attacks continuously along the entire front.

Third, there are negative as well as positive values in the battle against disease. There are values that are intangible, as well as values that are tangible. A reduced death rate means so many lives saved; likewise, a death rate that would have increased as much as another decreased, but for certain influences, means the same number of lives saved. No one can compute what the death rates from cancer, automobile and industrial accidents, diabetes, thyroid diseases, prostatic conditions, and many other conditions that could be mentioned might have been but for improvements in diagnosis and treatment, made possible largely through hospitals, the laboratories of modern medicine.

Fourth, the benefits of curative medicine as compared with preventive medicine are of slower manifestation. Perhaps when the functional set-up of hospitals catches up with their physical development, when there is a more perfect coördination of the various professional services as these are brought together in hospitals, the benefits of curative medicine, as reflected in declining morbidity rates, may be more impressive.

TABLE I

Reduced Death Rates Reg. Area Continental U. S. 1900-1927

Cause No.	Cause of Death	1900	Average 1923-27	Decrease	Percentage Decrease
	General Death Rate (per 100,000)	1755.0	1192.1	562.9	32.0
31-37b	Tuberculosis, all forms	201.9	87.6	114.3	20.3
113,114	Diarrhea and enteritis	133.2	35.0	98.2	17.4
11,101	Influenza and pneumonia	181.5	87.2	94.3	16.7
10	Diphtheria	43.3	8.9	34.4	6.1
1	Typhoid and paratyphoid fever	35.9	6.7	29.2	5.2
99,101	Bronchitis and broncho-pneumonia	67.6	47.9	19.7	3.5
165-203	External causes[1]	79.0	59.5	19.5	3.4
159-163	Malformations and diseases of early infancy	91.8	73.8	18.0	3.1
7, 8, 9	Common contagious diseases[2]	34.8	17.7	17.1	3.0
		869.0	424.3	444.7	78.7

[1]Less suicide, homicide, and automobile accidents.
[2]Measles, scarlet fever, and whooping cough.

TABLE II

Reduced Death Rates Reg. Area Continental U. S. 1900-1927

Cause No.	Cause of Death	1900	Average 1923-27	Decrease	
	General Death Rate (per 100,000)	1755.0	1192.1	562.9	
16	Dysentery[1]	11.3	2.9	8.4	
41	Septicemia	8.4	1.1	7.3	
51, 52	Rheumatism[2]	9.7	4.1	5.6	
122	Cirrhosis of liver	12.9	7.3	5.6	
5	Malaria	7.9	2.4	5.5	
29	Tetanus	4.4	1.4	3.0	
21	Erysipelas	5.1	2.5	2.6	
105	Asthma	4.4	1.9	2.5	
118	Hernia and intestinal obstruction	12.2	10.7	1.5	
6	Smallpox	1.9	.4	1.5	
		78.2	34.7	43.5	7.7%

[1]All forms, amebic, bacillary, and other forms.
[2]Acute, chronic, and gout.

TABLE III

Changes in Death Rate of Certain Surgical Conditions Reg. Area U. S. 1900-1927

No. Cause	Cause of Death	1900	1910	1915	1920	1925	1927	In-crease	De-crease
43-49	Malignant tumors	63.9	76.2	81.1	83.4	92.6	95.6	31.7	
188	Automobile accidents	.0	1.8	5.9	10.4	18.7	21.4	21.4	
111	Gastric ulcer	2.6	4.1	4.3	3.6	4.3	4.4	1.8	
123	Biliary calculi	1.5	2.8	3.3	3.6	4.0	4.0	2.5	
132	Calculi of urinary tract	.4	.6	.7	.6	.8	.8	.4	
126	Diseases of prostate	2.7	3.8	3.9	4.2	5.0	5.3	2.6	
60	Diseases of the thyroid[1]	.2	.4	.7	.8	.6	.6	.4	
60a	Exophthalmic goiter	.4	1.3	1.6	1.9	3.4	3.9	3.5	
86	Diseases of the ears[2]	.6	1.8	1.9	2.0	3.2	3.3	2.5	
86	Diseases of the mastoid					1.3	1.4		
117	Appendicitis and typhlitis	9.7	11.4	12.5	13.4	15.1	15.0	5.3	
								72.1	
126	Peritonitis[3]	15.1	4.5	2.3	1.9	1.6	1.6		13.5
118	Hernia and intestinal obstruction	12.2	12.4		10.6	10.8	10.4		1.8
41	Septicemia[4]	8.4	3.5	2.3	1.4	1.1	1.0		7.4
165-203	External causes[5]	79.0	82.6	70.4	61.0	59.6	57.0		22.0
									44.7

[1]Less exophthalmos.
[2]Including mastoid disease.
[3]In 1900 without regard to cause; in 1910 with puerperal forms excluded; in 1925 only where cause is not specified.
[4]Non-puerperal.
[5]Less suicide, homicide, and automobile accidents.

REPORT OF THE BOARD OF TRUSTEES

To the Members and Delegates of the American Hospital Association:

Your board of trustees takes a great deal of pleasure in reporting a very successful year for your Association. It has been a year of accomplishments and of definite progress in developing service to its members and to the entire hospital field.

Primarily, hospital operation and its increasing efficiency must be based upon incentive to the individual and to the institution. In its finest development it must depend upon the coöperation of our hospital administrators, one with another, through close association in a national organization. Your Association has developed with each succeeding year legitimate and constructive fields for Association effort. As an Association it has become an indispensable unit for the benefit of hospitals on this continent. Confidence, coöperation, and the exchange of ideas and experiences are the principles which should guide our institutions and their administrators. These principles find expression and definite development through your Association. The interest of our members in the work of the Association is particularly gratifying. It is evidenced in the support they give to the work of the Association and in the growing institutional and personal memberships. It is manifested in the increasing uses of the Association's varied services.

Relations with Other National Organizations

During the past year your Association has maintained the traditional friendly relations with other hospital associations and other national organizations, the purposes of which are closely allied to our own. The geographical sections of the Association are increasing in number and their coöperation and support bring to us a larger opportunity for service. Other state, provincial, and national hospital associations, not affiliated with our association as geographical sections, invariably coöperate and frequently coördinate their work with our own. Your Association, always in close sympathy with the purposes and objects of the American Medical Association, the American College of Surgeons, and the Association of American Medical Colleges, as related to hospital problems, has coöperated in every good way with these important organizations, to the ultimate benefit of our institutions and the entire hospital field.

It is with a deep sense of sorrow that your board reports the death of four members of the Association who have given many years to hospital endeavor and who have been valued members of the Association since

the early years of its organization. They have held important offices in the Association and their contributions to our institutions have been immensely valuable.

Mr. Eugene S. Gilmore, superintendent of Wesley Memorial Hospital, Chicago, one of the finest exemplifications of the administrator of a large hospital; recognized authority on hospital operation; a trustee of the American Hospital Association; one-time President; died September 12, 1931.

Mr. Frank E. Chapman, director of the University Hospitals of Western Reserve University, Cleveland, one of the outstanding hospital administrators of his time, passed away July 9, 1931.

Miss Lucia L. Jaquith, who for more than a quarter of a century was superintendent of the Worcester Memorial Hospital, Worcester, Massachusetts, died May 10, 1931.

Mr. W. W. Kenney, for thirty-three years superintendent of the Victoria General Hospital, Halifax, Nova Scotia, died February 5, 1931.

The Committee on Resolutions of this Association will report appropriate resolutions of respect for our associates.

National Hospital Day

The observance of National Hospital Day in 1931 was general in North America. Many hospitals overseas set this day apart for special programs to which the public was invited. The favorable publicity which was given our institutions by the press, over radio broadcasts, and by magazines and other publications has done more in maintaining the public faith in and the good-will for our institutions than any other single movement has done. Particularly gratifying were the scores of editorials in the metropolitan press commending the work of our institutions and calling to public attention the immense value of their services to their communities. The publicity given to this day this year was greater than that given to any other public welfare movement, with the exception of the Red Cross. Newspapers, magazines, and other publications contained more than ten million words of favorable comment upon our hospitals during the week of May 12.

Hospital Legislation

The Association has given particular attention, through its Legislative Reference Committee, to legislation introduced or enacted in the various states or provinces, as well as in the national governments. The advice and counsel of the Association relative to legislative matters have frequently been requested in the past year and the good offices of the Association have been made available to state hospital associations and to public

welfare organizations in connection with matters affecting hospital legislation.

The Association Finances

The finances of the Association are on a sound basis. During the past year the income of the Association has been sufficient to meet all operating disbursements. We have purchased $1400 worth of Association bonds at par and accrued interest, leaving but $21,800 of the original $60,000 of the bond issue outstanding. One thousand dollars has been applied on the base mortgage, leaving the total capital indebtedness of the Association $70,800, as compared with $110,000 at the time of the purchase of our building a little over five years ago. A cash reserve for the payment of taxes that are due and unpaid, amounting to $1300, has been set up. The Association has no other financial liabilities.

The Bulletin

Its official publication, THE BULLETIN OF THE AMERICAN HOSPITAL ASSOCIATION, will, for the first year since its establishment, show a slight margin of profit. It has been issued quarterly in its enlarged form and in each of the other months of the year has been issued as a monthly news bulletin. It now has a circulation of 4,250 each edition. It is growing appreciably in interest and value to the hospital field.

Hospital Library and Service Bureau

The work of the Library during the past year is of particular importance. Its service extends throughout the world. It has added a valuable collection of books, hospital plans, and studies, as well as other material, which is attracting the interest of hospital people not only in North America but overseas. A detailed report of its activities will be presented by the chairman of the Library Committee.

During the past year your board has given earnest consideration to many activities directly affecting the welfare of our institutions. The hospital field, constituting as it does a national industry, and one of its important ones, must have, if it is to function efficiently and successfully, the mass interest and mass protection of an active association maintained and controlled by the hospitals and hospital administrators. Your board approaches the study of these problems with the purpose of giving due consideration to every important detail connected with them; it analyzes every phase of these problems and arrives, if possible, at a solution which will benefit not one but all of our institutions.

The Government Program for the Hospitalization of the Veterans of Our Wars

The American Hospital Association is deeply interested in the steadily enlarging program of the Government for the construction of large hospitals, widely separated, involving the expenditure of many millions of dollars in construction and the annual expenditure of many more millions in maintenance and operation. The financing of these institutions, the use of which for the accommodation of the veterans of our wars will reach its peak within a few years, is a matter of grave concern, not only to our existing hospitals and to the members of the medical and nursing profession, but to those responsible for the expenditure of the Government funds. The American Hospital Association is in close sympathy and complete consonance with any program which will provide for the sick and disabled veterans of our country's wars the best of attention when they are ill, and which will aid in their speedy rehabilitation and reconstruction. The Association is in agreement that service disability should warrant the disabled soldier the best of hospital care and adequate compensation during the period of his incapacity. Your Association believes that there is no justification for the construction of veterans' hospitals beyond those at present authorized, and that adequate and satisfactory care can be provided by civil hospitals already established and in operation, with highly trained medical and nursing staffs and equipped with all the facilities for the care and treatment of disease or injury.

The hospitals belonging to this Association, and other hospitals not Government-owned, can provide the best possible medical care and hospitalization to the disabled veteran near his home, without taking him from his family or business interest, and, in the aggregate at a cost to the Government appreciably less than what it costs to build and operate veterans' hospitals. In those general hospitals of the United States which are approved by the national hospital, medical, and surgical associations there were available, on September 1, 76,000 vacant beds, the majority of which could be placed at the service of the Government for the care of the disabled soldiers. The large amounts involved in the cost of construction and operation of Veterans' Bureau hospitals must be reflected directly in increased taxation. The Government, through the Finance Committee of the Senate, and the Ways and Means Committee of the House of Representatives, is insisting upon the exercise of the greatest possible economy in the expenditure of Government funds, and the hospitals belonging to this Association, and other hospitals, can make a very large contribution to this end by offering their facilities to the United States Government for the care of the sick and disabled veterans.

Hospitalization of the Colored Sick

Your board of trustees in keeping with the purposes of the Association is interested at all times in extending every aid for the more efficient hospitalization of the colored sick. A committee from the National Hospital Association, a colored organization of hospitals, of which Dr. H. M. Green was chairman, outlined the plans for the development of negro hospitals and for the care of the negro sick in other hospitals. They came to the American Hospital Association for advice, counsel, and support and presented their plans for the further development of negro hospitals. The improvement in these hospitals, particularly in the South, has been due in a very large degree to the work of Dr. Green and his associates. The plans submitted by this committee were sound and worthy of support. Your board of trustees formally expressed appreciation of the accomplishments of Dr. Green's organization and endorsed its efforts.

The Base Mortgage on the Association Property

At the time of the purchase of the Association property a mortgage was placed, through a Chicago bank, for $50,000 and this has been carried for the past three and one-half years as a commercial loan, at a favorable rate of interest, and renewed at short-time periods. About one year ago the bank advised that it was their desire to have this loan liquidated. The efforts of the Association have been confined largely to reducing the bonded indebtedness and more particularly as the bank at no time had requested a payment of the mortgage. The board is now seeking to refinance the loan on a long-time basis and to arrange for its amortization as the income of the Association will permit.

Your board has given consideration to the many suggestions which have been proposed for increasing its service to the hospital field. To this end it is arranging a meeting of the presidents of state, provincial, and regional associations to informally discuss the problems that are presented to them and to the membership of their particular associations, for the purpose of developing a better understanding and the closest possible coöperation in the efforts of the Association to be of service to our institutions.

The Future Program for the Association

Your board has given careful thought to many suggestions received from members and others interested in the work of the Association relative to the future activities of your Association. Practically all of the proposals submitted have merit. The Association is gradually expanding the number and the extent of its activities. It must constantly keep in mind the limitations that are imposed upon the Association by the revenue the Association receives each year. The operating disbursements of your Association

are carefully budgeted. As rapidly as the funds become available for increasing Association activities your board adds to the constructive program which the Association desires to successfully accomplish.

The purchase of the Association property five years ago made it necessary to assume a substantial indebtedness which has been reduced to a point where it is hoped that it can be financed on a long-term plan and that ample provision for the amortization of the indebtedness may be put into effect without too serious a drain upon the Association's operating income. The recent taking over of the Hospital Library and Service Bureau has entailed an average annual expenditure of a little more than $10,000, for the two and one-half years during which it has been under the Association's control. There has been no support of any kind given to the Library from other sources. All of its operating budget has been provided from the operating income of the Association.

Your board is confident that as the Association grows in numbers as well as influence, one by one many of the activities which should be essentially a part of the program of an association of this character will be put into full operation. Your board during the past year has given consideration to the following activities of major importance:

1. The development of a constructive program of accomplishment for the American Hospital Association.

Your board feels that with a well defined program, which is based upon the necessities of the hospital field and which is within the range of accomplishment by this Association, may attract to the Association the financial support of philanthropists who are interested in hospital development and in hospital progress. To this end the board has authorized the appointment of a committee upon a constructive program for the American Hospital Association and, after this committee has been appointed and has given the subject the thought and consideration that is warranted, its conclusions and recommendations will be reported to the board of trustees and to this Association.

2. Criteria for hospital construction, maintenance, and operation.

The need for established criteria for hospital operation and hospital administration is evident. The American Hospital Association is logically the organization which should establish such criteria. If this work was well done it would solve many of our existing hospital problems, would contribute a great deal to the more efficient care of the sick, and would provide definite rules of hospital procedure. The hospitals in their clinics, their laboratories, their operating rooms and out-patient departments, comprise a great business—the business of preventing disease and making and keeping people well. It is the only activity of such large economic

importance to the public, in the operation of which the annual expenditures approximate a billion dollars, that has no established criteria for its operation and administration.

3. The establishment of a hospital research bureau.

Ten years ago the board of trustees of this Association gave earnest consideration to the establishment of a bureau of hospital research. Practically every board of trustees since that time has been greatly concerned in providing the ways and means by which this research bureau might become an important activity of the Association. It would be of very large value to the hospital field, and included in the future program of your Association is the establishment and maintenance of a research bureau.

4. The development of the official publication of the Association from a quarterly to a monthly magazine.

THE BULLETIN OF THE AMERICAN HOSPITAL ASSOCIATION has been well received, not only by the members of the Association but by the public as well. Since its beginning it has been issued quarterly. For the first year since its operation it will show a very small margin of profit. Your board has given serious thought to the development of THE BULLETIN from a quarterly to a monthly publication.

Respectfully submitted,

THE BOARD OF TRUSTEES
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THE POSSIBLE EFFECT OF HEALTH INSURANCE UPON OUR HOSPITALS

By G. Harvey Agnew, M.D.
Secretary, Department of Hospital Service, Canadian Medical Association

According to the IXth Roman Law, *Salus populi suprema lex est*, the health of the people was the highest law, and today, more than ever before, health legislation is occupying the minds of our statesmen and social leaders. Canada and the United States have many valuable assets, but the greatest of these is health. The public realizes the value of health today as it has never done before and the masses are determined to have the maximum degree of health with the minimum expense to the individual.

Since Germany opened the gates in 1883 to the nationalization of medicine, this wave has overswept our western civilization until now 24 of our leading world countries have made health insurance compulsory and nearly as many others have a voluntary system of health insurance. In fact, it comes somewhat as a shock to health workers here to realize that the United States and Canada are almost the only important countries which have not adopted some form of nationwide health insurance.[1]

That we on this continent will be required to give this development elsewhere serious consideration is becoming increasingly evident. The public unrest and discontent over the cost of sickness are very widespread and hospitals and the medical profession have been subjected to much unwarranted criticism by misinformed writers who do not realize that the public, not the hospitals, is responsible for some of the less desirable features of our present system. Labor organizations have been advocating some form of "state medicine" (a badly used and misunderstood term) for years, the farmers' organizations in the west have supported similar schemes and, here in Canada, our Federal Liberal party has definitely endorsed the nationalization of medicine. In the province of British Columbia,[2] compulsory health insurance would be, in all probability, in full operation by now had it not been for the unfortunate death of Mr. C. H. Gibbons, the secretary of the Royal Commission, and for the present financial depression which has made the government hesitant to assume heavy financial responsibilities.

As a matter of fact, we have already many evidences that "the old order changeth, yielding place to new." For instance, the various state and provincial workmen's compensation boards are simply compulsory health insurance schemes on a small scale. Large industries have their own

surgeons and their own hospitals, and often the families are cared for as well as the workmen. War veterans both here and in the United States are cared for at the expense of the country and in both countries free hospital care is provided even though the disability may have no relationship whatsoever to his war service. Psychiatric patients are cared for by the state or the province. Here in Canada we have, in our western provinces, municipalities supporting, by taxation, not only the local hospital but the local physician who is on a stated salary. In Saskatchewan all tuberculosis treatment is free to everyone, the government apportioning a share of the costs to the municipalities. And our Federal government finances the hospital care of sick mariners from a special levy on ocean freight tonnage.

I mention this background of converging data to emphasize one particular point: *our hospitals are vitally concerned with the development of health insurance*. It cannot do otherwise than affect the hospitals, and it is timely that the hospitals heed the situation.

HOW WILL THE HOSPITALS BE AFFECTED?

In all probability any scheme of health insurance adopted here would *include hospital care*. It is so in most systems abroad and is a *sine qua non* with the majority of students of this question. It could be anticipated also that the hospitals would be paid upon a cost basis, although in many countries, such as Denmark and Germany, this payment is far below cost. As Sir Arthur Newsholme finds, "This inadequate payment for hospital treatment is a general feature of the Continental experience of sick funds."[3] Presumably this payment would entitle the patient to a standard basic accommodation and service and, should better accommodation or extras be desired, the difference in cost would be borne by the patient himself or by his friends. Should such an arrangement come into effect, payments received by the hospitals, for most of the cheaper accommodation at least, would be assumed by some central organization rather than by the patient.

How might this rearrangement of the financial support affect the hospitals? We can take it for granted that if the government or some commission assumes the major portion of the financial support of our public hospitals, it is quite likely to demand a certain standard of service, increased clinical facilities, and, if possible, decreased operating costs. Naturally, when a body or organization foots the bill, it feels that it should have considerable say in effecting economies or in demanding services *quid pro quo*.

COMPLETE HOSPITAL PROVISION REQUIRED

We could anticipate a demand that hospital service in each community be as complete as the local situation requires. Most communities have quite

adequate *general* hospital accommodation, although there are still vast gaps in the more sparsely settled areas. But in the great majority of communities there is a woeful lack of provision for the convalescent patient, the chronic invalid, or the incurable. Our accommodation for the insane is inadequate and nobody wants to assume responsibility for the narcotic addict or the venereal case. I visit many towns across the country where there is little or no provision made for communicable disease; in fact outside of our larger centers the isolation facilities as a general rule are utterly inadequate, a situation which in Canada at least reflects badly on the municipal authorities upon whom rests the responsibility to provide this accommodation.

This lack of *complete* provision of hospital service is the natural result of our uncoördinated system of hospital erection whereby the initiative is left to local philanthropy or enterprise. As a result of this haphazard system we sometimes find, associated with a lamentable lack of special accommodation, a surplus of tiny non-coöperating general hospitals in adjacent or sometimes the same community, resulting in overlapping and duplication, a situation which is costly and fails to provide the diagnostic facilities only possible in larger hospitals.

If we develop a system of health insurance, *complete service will be demanded,* in the more populous districts at least; also those responsible for the financial support will insist upon duplication and overhead being reduced to a minimum. Therefore it is not inconceivable, in any radical revision of our hospital system, that the extent and type of hospital accommodation for each area may be arranged along a definite preconceived and coördinated plan of development, as in certain European countries. For instance, in Sweden new construction and all enlargements must be approved by the state medical board which has supreme jurisdiction over all Swedish hospitals. This development, should it arise, would be of much concern to our many public hospitals operating under private boards and particularly to hospitals directed by religious orders or denominations.

However, while Sweden, for example, has taken the commendable step of providing hospital care for cases of chronic rheumatism, neuroses, after-effects of accidents, etc., institutional treatment in connection with welfare work in other countries, as Sir Arthur Newsholme points out, is "hampered by the limitation of insurance funds, and not completely forthcoming on public health grounds when patients are unable to pay."[3] Also, in France, patients can be sent to a hospital only if absolutely necessary and patients are not admitted to a hospital except upon a doctor's certificate, countersigned by the mayor. This is dangerous in the case of an emergency.

Moreover, the increasing emphasis which is being placed upon

radiological and laboratory diagnosis and the difficulty of supplying reliable technical service in the smaller hospitals may result in much greater co-operation and affiliation between hospitals in the future. It is quite possible, with the better transportation by land and air of today and with some co-ordinated system of direction, that ultimately a scheme might be developed similar to the military arrangement of casualty clearing stations and base hospitals, thus enabling the small rural hospital to provide its patients when necessary with the very best in diagnostic and therapeutic care. In Australia in the remote Queensland districts, the Australian Inland Mission (A. I. M.) operates a most valuable "aërial medical service." If the patient at the outpost cannot be removed to the central hospital, a skilled surgeon is carried by plane to the patient.

POSSIBLE EFFECT UPON PRIVATE SUPPORT

All of these possible developments would spell encroachment upon the prerogatives of private boards of public-spirited citizens who now give unstintingly of their time in the interests of our public hospitals. If it is possible to make a comparison with the situation abroad, admitting that the hospital system is not exactly parallel, we may logically anticipate a definite decline in the number of hospitals under voluntary boards and a corresponding increase in the number of civic or municipal hospitals.

In Germany, the percentage of state- or municipal-controlled hospitals has steadily risen until now 88 per cent are under public control. In Denmark and in Norway practically all hospitals are under state, county, or municipal direction. In Austria only the wealthy patronize private nursing homes; all others go to municipal hospitals. Spain has practically no private hospitals, nor have Poland, Egypt, and many of the South American countries. Holland still has a number of privately operated hospitals under the direction of religious bodies, but the majority are municipal hospitals. Switzerland is more like Canada and the United States, inasmuch as each canton has its own system. However, nearly all hospitals are under cantonal government. In Belgium and in many other countries the *mutualités* or societies have set up their own hospitals and sanatoria.

What effect would this evolution have upon private philanthropy? We can judge from our present experience with municipal or civic hospitals. Although the principle is sound that hospital deficits should be borne by the many, not by the generous few, the fact remains that civic hospitals, with a few exceptions, receive very few donations or private contributions. This decline in philanthropy is a greater loss than most hospitals realize and there is general agreement that private philanthropy would decrease markedly under a system of health insurance.

This possibility is causing considerable anxiety to the voluntary hospitals

in Great Britain at the present time, for it is thought that the recent elevation in status of the County Council Hospitals, the old poor law hospitals, will reduce the subscriptions to the voluntary hospitals. Already many of these voluntary hospitals, formerly almost entirely public, are preparing for the rainy day by developing wings or pavilions for private patients.[4]

POSSIBLE EFFECT UPON TYPE OF CONSTRUCTION

With the adoption of health insurance, we would see developed a *new intermediate service* to accommodate the majority of these insurance patients, for, with the paying (or paid for) public ward patients separated from the charity patients, there would not be such a demand, in all likelihood, for exclusive accommodation; nevertheless, something better than the public ward would be required. Already we see some of our compensation boards insisting that hospitals provide special wards—really semi-private rooms—for their cases. I would not hesitate to predict that much of the hospital accommodation of the future will be composed of small, well equipped wards of three or four beds—actually semi-private accommodation. Also the introduction of health insurance into Great Britain greatly increased hospitalization. It has been noted also that there is frequently an increase in out-patient department work. In England many more patients are being referred to the out-patient clinics for specialist advice.[5] Therefore the erection of new, or conversion of old, accommodation would be an early demand upon a great many of our hospitals.

THE EFFECT UPON THE MEDICAL STAFF

What about the medical staff? Altogether apart from the effect on his private practice, the doctor would be much concerned over his hospital relationship, for with the inevitable increase in hospitalization the practitioner would be very anxious to retain or obtain hospital privileges.

The present tendency of larger hospitals here is to limit hospital practice, especially on the public wards, to certain practitioners of proven ability. While this process of exclusion may be overdone in some hospitals, it is, nevertheless, a necessity in teaching hospitals and has been found advantageous to the patients in certain others. Also, compensation boards, industrial concerns, and insurance companies favor the concentration of their work into a few hands.

This tendency to limit certain privileges would most likely be increased under a health insurance scheme. Again we must consult precedent elsewhere. Germany affords us an interesting study.[6] There the large majority of the hospitals are closed and the hospitals or services are under a full-time "head doctor" with one or more assistants. Although the chief is a full-time man, he is allowed to do a little private practice. However, he

must take his private patients to a private clinic, not to his own hospital. Vacancies in larger hospitals are filled by advertisement, not by promotion. Salaries are small, especially for assistants, and marriage must be delayed. In some Bavarian hospitals the doctor is remunerated by receiving 10 per cent of the hospital charges to the patient. In some hospitals all private fees are taxed. There are private clinics but socially insured patients cannot attend them.

A great deal of the staff doctor's time is consumed in keeping up records. This is irksome to the doctor who is not interested in the clinical side of the work. His training has been a scientific one and he is devoting his time to the consideration of diseases which, unfortunately, seldom recognize any rules or regulations. As Kerschensteiner points out,[6] "Highly trained medical men are kept busy—wasting valuable time—doing routine work."

Also there is a tendency for such a scheme to break down the personal relationship between doctor and patient. This has caused much adverse comment in both England and Germany. In most cases patients are sent from their family physician (in whom they have confidence) to an unknown specialist. This lack of what one German writer characterizes as "the human touch" has resulted in a tremendous increase in quacks—one to every four regular practitioners. "The system is used not for obtaining health, but doles." It has increased sickness and prolonged convalescence. Another feature is that the rapid increase of polyclinics or ambulatories has seriously affected private practice.[3] This is bad for the patient, since diagnosis is hurried, there is no continuity of medical supervision, and the patients lose a great deal of time.

Perhaps many of these difficulties could be overcome on this continent, but it is quite probable that an effort would be made—and perhaps rightly—to limit certain technical therapeutic or operative procedures to specialists in these fields. Also, because of the great possibilities for malingering or fraud—much greater in medical cases than in the traumatic cases handled by the compensation boards—an extensive system of consultation or review boards would be imperative. Therefore, to your medical staffs, this matter of health insurance is one of vital importance.

What effect would it have upon our university hospitals and our medical schools? Many university teachers anticipate a falling off in the number of indigent patients available for the demonstration of pathology—patients who thus repay in small part for the skilled treatment gratuitously given. Would university hospitals come under the government as in Denmark where the *Rigshospital* or university hospital is under the Minister of Education and where the hospital doctors are state doctors? In Sweden the

superintendent is chosen from amongst the attending doctors and is appointed by the government. In Germany the insurance companies are bringing pressure to bear on the medical schools to place more emphasis on teaching for insurance practice.[1]

These are but a few thoughts that come to mind upon this subject of health insurance and its possible effect on hospitals. It is not likely that we shall ever duplicate here the systems developed abroad, but there is no doubt but that further radical changes may be anticipated in our own methods here. In this address I may have emphasized some of the less desirable features of health insurance; it is only fair to point out, however, that much good has been accomplished by these developments and it is noteworthy that no nation has ever abandoned the scheme, once it has been inaugurated. Mistakes have occurred and hardships and injustices have arisen but these experiments are still young. As Sir George Newman so well expressed it in the 1930 Halley Stewart lecture,[7] "Speedy methods of social amelioration have at all times in history brought their own complications and trouble with them. A nation is not a machine which can be speeded up, it is a living organism which grows." It is very timely that our hospital associations should consider this subject very seriously—not that we desire to hasten the precipitation of an experiment fraught with many potential dangers, but because we, as hospital workers, should be prepared, on behalf of the hospitals and their future patients, to be of constructive assistance in the moulding of public opinion and legislative action.

REFERENCES

1. Commission on Medical Education: Medical Education and Related Problems in Europe, April, 1930.

2. Mc Intosh, J. W.: The State Health Insurance Movement in British Columbia. Canadian Public Health Journal, XXI:12, pp. 584-589, 1930.

3. Newsholme, Sir Arthur: International Studies on the Relation between the Private and Official Practice of Disease. The Milbank Memorial Fund, 1931. Vols. I and II.

4. Editorial, The Hospital (London), XXVII:5, p. 102, May 1931.

5. Layton, T. B.: The Influence of Health Insurance upon Hospital Practice. Report to Second International Hospital Congress, Vienna, June 1931.

6. Kerschensteiner, Herman: Der Arzt in Deutschen Krankenhaus.

Philipsborn, Alexander: Die Stellung des Arztes im Gemeinnützigen Krankenhaus. Nosokomeion, Jan. 1931.

Lichtwitz, L.: Kranker, Krankenhausarzt, und Hausarzt. Nosokomeion, 1930.

7. Newman, Sir George: Health and Social Evolution. Halley Stewart Lecture, 1930.

STATISTICAL ANALYSIS OF 2396 REPORTS

SHOWING ADMINISTRATIVE AVERAGES AND TOTALS BY STATES

By J. S. Parker

A study of the reports of 2,396 hospitals with a capacity of 463,480 beds, out of the total of 955,869, the large majority of which were general and special hospitals and non-tax supported, presents many interesting features. It shows a very definite reduction in total bed occupancy, in a majority of the institutions a marked reduction in operating costs, in practically all a larger demand for free service, and a marked increase in the admission of patients who are unable to pay for hospital care. It reveals a decidedly decreased revenue from private patients and patients who are able to pay at least a part of the cost of their hospitalization and a greatly lowered occupancy in private and semi-private rooms.

While there is a sizeable number of state, city, and county institutions included in this study, the majority of the hospitals and the largest number of hospital beds included are dependent upon the earnings of the hospitals and the support given by private philanthropy for their continued operation.

Of particular interest is the evidence of the successful effort which the reporting hospitals have made in keeping up their standards of efficiency. This is well illustrated in the increase in the number of autopsies, in the maintenance of nurse training schools, properly organized laboratories, well equipped dietary departments, the increase in the number of social service departments, and the growth of occupational therapy in these institutions. The fact that 68.7 per cent of these hospitals have organized staffs is of special significance.

Of the 2,396 hospitals reporting, 1,729 forwarded the information requested in a complete form, and this study was based upon these reports for the fiscal year ending June 30, 1931.

Decreased costs of management were a significant aid to the ability of American hospitals to weather the depression year of 1930, according to 2,315 reports made to the American Hospital Association by both members and non-members of the organization. Out of 1,950 institutions which answered the question concerning decreased costs, 792, or 40.6 per cent, reported decreased costs; 453, or 23.2 per cent, reported increased costs; and 705, or 36.2 per cent, reported no change in costs. Stated in other words, only 23.2 per cent reported increased costs as against 76.8 per cent which reported no increase in costs. The average cost per patient-day for 1,729 hospitals which reported on this item was $4.38.

TABLE 1—COSTS AND CHARITY WORK

	Number Reporting Charity	Charity Percentage	Number Reporting Costs	Patient-Day Costs	Total Giving Comparative Costs	Number with Increase in Costs	Number with Decrease in Costs	Number with No Change in Costs
Alabama	18	37.5	15	$4.69	19	5	6	8
Arizona	11	49.8	6	2.25	11	5	4	2
Arkansas	13	31.3	15	4.20	19	4	5	10
California	68	43.7	82	5.18	101	26	44	31
Colorado	19	40.7	21	4.41	28	6	11	11
Connecticut	20	27.9	34	5.08	35	12	10	13
Delaware	3	35.7	4	4.95	4	2	2	0
Dist. of Columbia	9	40.9	9	5.47	9	4	1	4
Florida	17	34.2	18	5.70	20	4	8	8
Georgia	24	40.0	24	4.32	30	4	13	13
Idaho	10	33.4	9	4.40	12	3	7	2
Illinois	79	29.9	84	4.95	101	22	48	31
Indiana	27	27.0	39	4.68	47	7	26	14
Iowa	32	18.7	36	4.16	46	8	18	20
Kansas	29	14.3	29	4.38	37	7	10	20
Kentucky	30	35.2	30	3.97	35	9	15	11
Louisiana	15	33.5	15	5.16	18	6	5	7
Maine	14	43.6	18	3.86	20	8	3	9
Maryland	22	51.6	22	4.55	29	13	9	7
Massachusetts	75	32.9	94	4.64	104	33	51	20
Michigan	50	33.4	59	5.00	67	6	39	22
Minnesota	56	27.6	66	3.97	80	7	39	34
Mississippi	14	33.3	15	4.23	19	1	11	7
Missouri	42	33.2	38	4.46	45	9	15	21
Montana	8	19.1	12	3.88	35	3	6	26
Nebraska	18	28.7	17	4.01	27	7	11	9
Nevada	1	98.0	2	1.79	5	0	2	3
New Hampshire	7	23.3	10	4.38	12	3	2	7
New Jersey	47	52.3	59	4.74	56	24	18	14
New Mexico	3	40.3	6	3.02	7	3	1	3
New York	153	34.4	200	5.23	191	47	81	63
North Carolina	31	35.0	35	3.98	39	7	21	11
North Dakota	16	9.7	16	3.57	19	2	8	9
Ohio	83	30.0	114	5.72	102	18	50	34
Oklahoma	23	20.3	24	4.34	30	5	14	11
Oregon	8	38.7	13	3.96	19	5	5	9
Pennsylvania	151	42.9	156	4.64	162	52	58	52
Rhode Island	8	34.8	10	5.47	13	8	4	1
South Carolina	11	55.4	15	3.87	12	1	4	7
South Dakota	12	10.2	12	4.47	14	3	7	4
Tennessee	26	40.8	27	4.21	28	5	14	9
Texas	51	30.0	52	4.88	58	8	24	26
Utah	8	18.5	8	4.29	9	2	5	2
Vermont	9	12.0	10	4.94	9	0	4	5
Virginia	26	21.2	29	4.22	33	9	9	15
Washington	21	41.6	24	3.91	28	7	8	13
West Virginia	15	21.3	14	4.33	17	5	4	8
Wisconsin	39	18.6	51	4.20	57	10	22	25
Wyoming	4	13.8	6	5.90	8	2	3	3
Canada	18	39.6	25	3.54	24	6	7	11
Totals and Aver.	1,494	33.2	1,729	4.38	1,950	453	792	705

Other results of the financial stress during 1930 show themselves in lowered bed occupancy of the institutions and in a shorter duration of stay for patients. Whereas in other years the average duration of stay for general hospitals has approximated 12 days, this year it is 10.93 days. Likewise the percentage of occupancy has usually been greater than 65 per cent, but this year it has dropped to 62.36 per cent. The significance of this occupancy average is still greater when we remember that the figures include a number of government hospitals and custodial institutions whose occupancy is nearly 100 per cent; thus the occupancy in other hospitals must have been low, to bring the average to a level of 62.36 per cent.

But in spite of financial difficulties, the institutions have not lowered their standards of service nor lost their technical excellence. The reports on institutional deaths and autopsies show that for 2,129 hospitals the percentage of autopsies was 24.5. Departmental services continued without serious curtailment. Students of nursing problems will be interested to note that there was an increase in the enrollment of student nurses in 569, or 72.8 per cent, of the 781 schools reporting on this subject.

The data submitted in the reports for 1930 have been divided into six different groups, and are summarized by states in the following six tables:

Table 1—Costs and Charity Work
Table 2—Disbursements
Table 3—Patients and Occupancy
Table 4—Departments and Schools of Nursing
Table 5—Autopsies and Institutional Deaths
Table 6—Clinical Classification of Beds

Detailed discussions of the findings in each group follow.

Costs of running hospitals vary widely not only among the various clinical and control classifications of institutions, but also within these special groups. But when the costs of hospital operation in any given state are averaged regardless of type, a general picture of the costs in that section of the country is presented. Table 1 shows these average costs for each state.

Analysis of this table discloses that eight states have average patient-day costs of more than $5.00. Wyoming's cost of $5.90 is an average of only 6 hospitals, probably too small a number for a general average. The same applies to the average cost of $5.47 reported by 9 hospitals in the District of Columbia. Omitting these two states, the following six states have the highest costs: California, $5.18; Connecticut, $5.08; Florida, $5.70; New York, $5.23; Ohio, $5.72; Rhode Island, $5.47. One might

TABLE 2—DISBURSEMENTS

	Number of Hospitals	Number of Beds	Disbursements	Disbursements per Bed	Disbursements per Hospital
Alabama	16	1,330	$873,188.00	$656.53	$54,574.25
Arizona	6	395	163,186.67	413.13	27,197.78
Arkansas	14	999	739,833.65	740.57	52,845.26
California	92	29,434	25,967,468.52	882.23	282,255.09
Colorado	21	2,701	3,050,378.85	1,129.35	145,253.75
Connecticut	34	7,092	7,909,065.20	1,115.21	232,619.56
Delaware	4	329	390,176.32	1,185.95	97,544.08
Dist. of Columbia	9	5,819	6,097,905.19	1,047.93	677,549.02
Florida	18	5,105	2,911,246.79	570.27	161,735.93
Georgia	26	2,380	2,288,038.66	961.36	88,001.48
Idaho	10	713	384,050.95	538.64	38,405.09
Illinois	91	31,969	22,594,380.20	706.76	248,289.89
Indiana	41	8,492	5,214,049.76	614.00	127,171.95
Iowa	38	5,185	3,854,433.71	743.38	101,432.47
Kansas	28	2,080	1,880,821.08	904.24	67,172.18
Kentucky	31	2,856	2,242,633.78	785.23	72,343.02
Louisiana	13	2,835	1,709,143.08	602.87	131,472.55
Maine	18	2,323	1,694,463.00	729.43	94,136.83
Maryland	24	6,252	4,792,451.60	766.55	199,685.48
Massachusetts	89	25,112	17,656,800.35	703.12	198,391.01
Michigan	65	25,532	10,762,281.86	421.13	165,573.56
Minnesota	62	11,824	9,001,387.16	761.28	145,183.66
Mississippi	12	600	422,831.77	704.72	35,235.98
Missouri	40	11,332	8,338,973.21	735.88	208,474.33
Montana	13	1,016	638,076.36	628.02	49,082.80
Nebraska	17	2,403	1,034,695.31	430.58	60,864.43
Nevada	2	320	115,000.00	359.38	57,500.00
New Hampshire	10	663	539,147.27	813.18	53,914.72
New Jersey	61	20,246	17,818,452.21	880.10	292,105.77
New Mexico	6	385	223,587.46	580.74	37,264.58
New York	196	58,307	49,344,070.09	846.28	251,755.45
North Carolina	34	2,950	2,229,842.20	755.88	65,583.60
North Dakota	15	901	663,447.80	736.34	44,229.85
Ohio	110	14,978	19,201,132.50	1,281.96	174,555.75
Oklahoma	27	4,537	1,346,437.42	296.77	49,868.05
Oregon	12	2,190	1,406,867.01	642.40	117,238.92
Pennsylvania	161	38,551	35,019,876.25	908.40	217,514.76
Rhode Island	13	4,529	3,534,666.18	780.45	271,897.40
South Carolina	16	1,286	1,014,898.48	789.11	63,431.15
South Dakota	10	583	472,938.59	811.21	47,293.86
Tennessee	24	3,053	3,070,594.37	1,005.76	127,941.43
Texas	53	5,769	5,062,098.69	877.43	95,511.30
Utah	7	1,671	704,802.58	421.78	100,686.08
Vermont	9	538	535,971.22	996.11	59,552.35
Virginia	28	4,871	2,560,036.20	525.56	91,429.86
Washington	24	2,545	2,175,472.91	854.80	90,644.70
West Virginia	16	1,943	1,482,622.07	763.06	92,663.88
Wisconsin	52	5,550	5,778,578.06	1,041.20	111,126.50
Wyoming	6	118	79,823.62	676.47	13,303.94
Canada	26	6,239	7,235,468.56	1,159.71	278,287.25
Totals	1,749	378,831	$304,227,692.77		
Averages		216		$765.65	$131,671.86

naturally expect Illinois and Pennsylvania to be in this group of high-cost states. Illinois' cost is nearly within the class—$4.95. Pennsylvania's cost is $4.64.

At the other end of the range, 13 states, all told, report average costs of less than $4.00 per patient-day. Four of these states have costs which are so near $4.00 that they should not be included with other low-cost states. They are as follows: Kentucky, $3.97; Minnesota, $3.97; North Carolina, $3.98; Oregon, $3.96. Three have averages based on so few reports that it would be unfair to include them. They are as follows: Arizona (six reports), $2.25; Nevada (two reports), $1.79; New Mexico (six reports), $3.02. Excluding these seven states, there remain six which may properly be considered as low-cost states: Maine, $3.86; Montana, $3.88; North Dakota, $3.57; South Carolina, $3.87; Washington, $3.91; and Canada, $3.54. It is interesting to note that with the exception of Maine, North Carolina and Canada, the low-cost states are in the Northwest.

These costs for all types of hospitals, as one would naturally expect, are lower than those for general hospitals alone. The American Hospital Association survey published in 1929 disclosed a cost of $5.32 for 676 general hospitals.

That the hospitals have met the emergency period by reducing costs of operation in their institutions is proved by the figures contained in the first paragraph and summarized below for convenient reference:

	Number of Hospitals	Percentage of Hospitals
Increased costs	453	23.2
Decreased costs	792	40.6
No change in costs	705	36.2
Total hospitals reporting	1,950	100.0

These cold figures tell nothing of the retrenchments, the heart-breaking worry of superintendents, the effort to maintain high standards of service, the need at times to risk an organization's efficiency by cutting out workers or combining jobs, and all the other expedients to which hospital administrators have been forced in order to balance their budgets. But the vital fact remains: no matter how difficult the process may have been, costs have been cut and the able managements of these institutions have met a financial crisis just as they meet daily crises in ministering to sick sufferers.

It must be remembered that these accomplishments have been achieved in the face of perhaps the greatest demand for charity service in the history of hospitals. Reports of 1,494 hospitals show that in these institutions

TABLE 3—PATIENTS AND OCCUPANCY

	Number of Hospitals	Number of Patients Constantly in Hospital	Total Number of Patient-Days	Average Duration of Stay (Days)	Average Percentage of Occupancy
Alabama	22	1,754	18,584	8.30	57.29
Arizona	14	756	13,550	11.14	65.44
Arkansas	21	1,071	9,909	9.42	51.25
California	118	2,743	79,645	13.16	69.51
Colorado	34	1,655	43,685	13.05	65.35
Connecticut	42	2,474	53,251	13.33	67.48
Delaware	4	1,394	19,080	11.33	66.25
Dist. of Columbia	10	4,215	204,670	9.89	75.33
Florida	23	1,538	79,506	10.95	54.23
Georgia	34	1,378	20,909	9.58	48.39
Idaho	15	646	15,025	10.17	60.14
Illinois	124	3,960	72,986	10.22	66.02
Indiana	55	1,554	32,766	10.66	64.03
Iowa	55	1,460	23,663	10.65	68.68
Kansas	41	1,156	14,210	11.56	52.56
Kentucky	39	1,296	19,390	13.09	64.92
Louisiana	21	1,931	64,412	11.50	53.71
Maine	23	987	31,888	12.11	63.17
Maryland	27	1,846	79,416	12.26	70.19
Massachusetts	121	2,010	74,292	11.89	68.97
Michigan	82	3,109	102,266	10.05	69.33
Minnesota	94	1,743	94,717	10.14	63.81
Mississippi	21	753	8,052	7.79	48.21
Missouri	61	2,190	77,611	12.12	69.15
Montana	15	1,100	14,777	9.14	48.25
Nebraska	33	1,078	35,361	9.62	59.62
Nevada	5	171	36,614	10.50	70.25
New Hampshire	15	866	12,930	12.36	65.87
New Jersey	74	2,766	92,195	13.50	68.93
New Mexico	8	558	12,085	7.71	69.60
New York	235	2,845	81,005	12.69	72.40
North Carolina	44	1,179	19,083	10.26	53.45
North Dakota	21	1,094	9,603	8.58	43.87
Ohio	135	1,951	49,237	11.18	66.36
Oklahoma	36	843	51,189	9.71	50.00
Oregon	22	965	51,334	9.08	69.93
Pennsylvania	179	2,670	64,619	12.65	67.83
Rhode Island	14	2,092	112,770	13.62	73.62
South Carolina	18	1,067	16,289	10.08	60.58
South Dakota	16	1,069	10,253	8.21	58.15
Tennessee	32	2,175	38,997	11.76	64.44
Texas	78	1,594	20,977	9.63	59.54
Utah	14	1,548	25,147	11.00	59.38
Vermont	12	1,048	11,382	11.09	53.83
Virginia	39	1,484	51,222	10.14	62.50
Washington	36	1,216	31,356	13.59	74.40
West Virginia	22	1,309	24,054	9.80	59.75
Wisconsin	74	1,928	26,380	13.25	67.69
Wyoming	8	138	21,644	8.66	45.60
Canada	29	3,894	85,495	14.54	80.00
Totals	2,315	82,267	2,159,481		
Averages				10.93	62.36

the average amount of charity work was 33.2 per cent. Included are a number of governmental eleemosynary institutions. The eleven states which did more than 40 per cent free work, on the average, together with the percentages of charity for each, are as follows: Arizona, 49.8; California, 43.7; District of Columbia, 40.9; Maine, 43.6; Maryland, 51.6; Nevada, 98; New Jersey, 52.3; New Mexico, 40.3; Pennsylvania, 42.9; South Carolina, 55.4; Washington, 41.6. The Nevada figure is not representative because it is derived from only one out of six hospitals in that state. Only five states have an average of less than 15 per cent charity work. These groups and their average charity percentages are as follow: Kansas, 14.3; North Dakota, 9.7; South Dakota, 10.2; Vermont, 12; Wyoming, 13.8. In this list the Wyoming figure is the only one open to question: it is an average based on only four reports from 16 hospitals.

An attempt was made this year to discover the charity demand of the institutions as opposed to the work actually done. Some reported the percentage by which the demand had increased, while others gave such comments as "Greater," "Increased," "Great increase," etc. The reports show clearly that there has been a considerable increase in the demands for charity service made upon the nation's hospitals during 1930.

In view of reduced costs, lowered occupancy, and the shorter duration of stay of patients, one would expect the disbursements of the hospitals to decrease also. But in fact the average disbursements per hospital this year are about the same as last year. The data on this subject, listed in Table 2, cover 1,749 hospitals with 378,831 beds. Total disbursements of these institutions were $304,227,692.77. Average disbursements per bed for the entire group were $765.65 and average disbursements per hospital for the entire group were $131,671.86. Average disbursements per hospital for the previous year were $131,288.24. The correlation is remarkably close in view of altered conditions.

Four states—California, Illinois, New York, and Pennsylvania—reported total disbursements of more than $20,000,000. Three states—Arizona, Nevada, and New Mexico—reported total disbursements of less than $300,000.

Eight states—Colorado, Connecticut, Delaware, District of Columbia, Ohio, Tennessee, Wisconsin, and Canada—reported average disbursements per bed of more than $1,000. Six states—Arizona, Michigan, Nebraska, Nevada, Oklahoma, and Utah—reported average disbursements per bed of less than $500.

Six states—California, District of Columbia, New Jersey, New York, Rhode Island, and Canada—reported average disbursements per hospital of more than $250,000. Seven states—Idaho, Mississippi, Montana, North

TABLE 4—DEPARTMENTS AND SCHOOLS OF NURSING

	School of Nursing	Occup. Therapy	Patholog. Lab.	Out-Patient	Social Service	Dietary	Organized Staff	Increased Enrollment	Decreased Enrollment	Number of Schools	Average Enrollment per School	Present Enrollment of Reporting Schools
Alabama	11	2	11	11	2	10	14	6	2	10	47	473
Arizona	2	4	8	9	3	6	8	1	0	1	68	68
Arkansas	13	5	15	7	2	10	17	3	5	13	22	284
California	36	31	69	56	39	65	75	22	7	34	82	2,800
Colorado	13	6	19	14	6	17	23	7	3	13	61	791
Connecticut ..	18	11	29	15	12	28	34	10	8	19	56	1,068
Delaware	3	0	2	3	0	3	3	3	0	3	35	106
Dist. of Col...	8	2	8	8	7	9	9	6	1	8	78	627
Florida	12	5	16	11	6	16	20	2	5	11	40	442
Georgia	18	3	17	12	4	16	21	6	4	16	41	659
Idaho	4	1	4	3	0	3	7	1	1	3	33	100
Illinois	78	33	91	44	28	82	92	43	16	74	59	4,349
Indiana	19	9	26	13	8	20	27	9	1	15	75	1,131
Iowa	30	7	38	14	4	31	38	10	6	29	40	1,167
Kansas	24	4	22	9	1	23	27	11	6	24	33	792
Kentucky	17	8	25	11	3	19	24	6	3	17	32	541
Louisiana	9	3	17	6	4	9	14	2	4	10	57	579
Maine	14	4	15	8	2	12	16	9	1	15	35	525
Maryland	18	5	17	14	8	17	22	9	4	16	44	708
Massachusetts.	70	21	75	48	41	76	88	37	9	68	55	3,733
Michigan	33	19	49	44	28	50	54	16	5	31	72	2,239
Minnesota ...	43	18	56	32	17	41	53	12	13	44	70	3,073
Mississippi ...	15	1	9	7	0	11	12	2	5	12	15	184
Missouri	16	15	41	19	13	40	43	12	7	31	58	1,787
Montana	7	2	10	4	0	6	8	3	1	5	33	166
Nebraska	9	3	13	5	3	8	11	6	0	9	59	528
Nevada	0	1	2	2	0	0	1	0	0	0	0	0
New Hamp...	10	1	8	7	0	7	8	5	1	9	22	196
New Jersey ..	39	18	51	47	33	55	59	31	3	34	59	1,995
New Mexico..	0	2	4	5	1	2	3	0	0	0	0	0
New York....	116	59	176	121	99	152	189	59	20	112	78	8,701
No. Carolina..	28	4	28	22	3	25	31	13	7	30	28	829
No. Dakota...	8	3	10	4	0	8	12	5	3	9	40	365
Ohio	64	35	87	48	36	86	96	32	8	57	56	3,199
Oklahoma ...	11	9	23	11	1	13	23	6	5	12	30	359
Oregon	4	2	11	7	1	6	12	2	0	4	55	220
Pennsylvania..	124	50	147	124	82	134	149	67	14	119	62	7,414
Rhode Island.	9	6	10	10	8	11	11	3	1	6	86	515
So. Carolina..	8	2	8	6	4	12	13	4	1	8	37	297
So. Dakota...	6	2	10	2	1	9	10	4	1	7	28	197
Tennessee ...	18	5	20	14	7	21	24	11	3	17	51	864
Texas	25	6	30	15	7	28	31	20	9	34	37	1,258
Utah	5	2	5	5	1	6	8	3	0	5	70	348
Vermont	5	0	7	4	0	4	8	4	0	6	28	169
Virginia	27	5	31	15	7	30	31	11	3	25	36	885
Washington ..	13	5	22	11	6	18	24	8	2	14	54	761
W. Va.	17	3	18	9	1	11	19	9	2	17	29	487
Wisconsin ...	28	13	41	16	9	37	38	9	6	24	47	1,137
Wyoming	0	0	1	2	0	5	4	0	0	0	0	0
Canada	25	10	25	18	16	25	27	9	6	23	104	2,384
Totals 1,130		465	1,477	952	564	1,333	1,591	569	212	1,103		61,500
Percentages ..	48.8	20.1	63.8	41.1	24.4	57.6	68.7	72.8	27.2			
Average.....											56	

Dakota, Oklahoma, South Dakota, and Wyoming—reported average disbursements per hospital of less than $50,000.

Students of hospital economics have long emphasized the close interrelationship between the occupancy of an institution and its cost per patient-day. The occupancy figures secured in this survey are important for this reason as well as for their general interest. The data of Table 3 are based on reports covering a total of 197,575 admissions and 2,159,481 patient-days. The average duration of stay for each state as well as the average percentage of occupancy is shown.

Any state which shows an average percentage of occupancy of less than 50 must be hit hard by the depression or have a low economic level or both. Analysis of the state averages shows that five have dropped below this minimum, as follows: Georgia, 48.39 per cent; Mississippi, 48.21 per cent; Montana, 48.25 per cent; North Dakota, 43.87 per cent; and Wyoming, 45.60 per cent.

On the other hand, seven states report an average occupancy of more than 70 per cent, which must be considered good for 1930. They are as follows: District of Columbia, 75.33 per cent; Maryland, 70.19 per cent; Nevada, 70.25 per cent; New York, 72.40 per cent; Rhode Island, 73.62 per cent; Washington, 74.40 per cent; and Canada, 80 per cent.

For the entire country, the average occupancy was 62.36 per cent. This compares with 64.12 per cent for the previous year and with 71.28 per cent for the year 1928. It compares with the following percentages for general hospitals reported in the annual censuses of the American Medical Association: 1930, 64.7 per cent; 1929, 65.5 per cent; 1928, 69 per cent.

As an indication of the way in which the duration of stay has been lowered, consider the fact that six of the states show an average duration of stay of less than nine days, as follows: Alabama, 8.30; Mississippi, 7.79; New Mexico, 7.71; North Dakota, 8.58; South Dakota, 8.21; Wyoming, 8.66. On the other hand, 13 states have an average duration of stay of more than 12 days, as follows: California, 13.16; Colorado, 13.05; Connecticut, 13.33; Kentucky, 13.09; Maryland, 12.26; Missouri, 12.12; New Hampshire, 12.36; New York, 12.69; Pennsylvania, 12.65; Rhode Island, 13.62; Washington, 13.59; Wisconsin, 13.25; and Canada, 14.54.

Table 4 gives the number of hospital departments for each state and their percentage to the total number of hospitals included in the survey. Thus the extent to which these hospitals have developed their departmental organization may be measured. It is most interesting to note that 68.7 per cent of the reporting institutions have organized staffs, 63.8 per

TABLE 5—AUTOPSIES AND INSTITUTIONAL DEATHS

	Number of Hospitals	Number of Deaths	Number of Autopsies	Percentage of Autopsies
Alabama	18	1,499	266	17.7
Arizona	13	327	79	24.2
Arkansas	20	743	77	10.4
California	108	14,178	4,566	32.2
Colorado	30	2,663	886	33.3
Connecticut	39	3,822	918	24.0
Delaware	4	288	20	7.0
Dist. of Columbia	10	1,302	594	45.6
Florida	23	2,031	307	15.1
Georgia	31	1,935	350	18.1
Idaho	14	402	40	10.0
Illinois	114	16,050	3,420	21.3
Indiana	50	3,921	669	17.1
Iowa	51	3,061	535	17.5
Kansas	41	1,823	360	19.7
Kentucky	34	2,492	518	20.8
Louisiana	20	1,205	200	16.6
Maine	23	1,026	185	18.0
Maryland	26	2,135	358	16.8
Massachusetts	109	9,467	2,087	22.0
Michigan	71	8,721	1,724	19.8
Minnesota	89	6,041	2,551	42.2
Mississippi	19	600	29	4.8
Missouri	56	7,038	1,982	28.1
Montana	14	440	60	13.6
Nebraska	29	1,089	218	20.0
Nevada	5	56	14	25.0
New Hampshire	14	393	11	3.0
New Jersey	69	9,150	1,876	20.5
New Mexico	7	104	11	10.6
New York	228	31,985	8,687	27.2
North Carolina	41	1,845	225	12.2
North Dakota	21	542	100	18.4
Ohio	130	10,933	2,992	27.4
Oklahoma	33	1,430	139	9.7
Oregon	20	853	261	30.6
Pennsylvania	175	23,563	6,068	25.8
Rhode Island	12	1,798	483	26.9
South Carolina	15	1,157	236	20.4
South Dakota	16	604	44	7.3
Tennessee	29	2,436	629	25.8
Texas	71	4,620	785	17.0
Utah	11	631	100	15.8
Vermont	11	412	37	9.0
Virginia	36	2,155	374	17.4
Washington	33	2,719	718	26.4
West Virginia	21	1,128	183	16.2
Wisconsin	40	4,043	1,098	27.2
Wyoming	7	74	4	5.4
Canada	28	4,885	1,498	30.6
Totals	2,129	201,815	49,572	
Average				24.5

cent have pathological laboratories, 57.6 per cent have dietary departments, 48.8 per cent have schools of nursing, 41.1 per cent have outpatient departments, 24.4 per cent have social service departments, and 20.1 per cent have occupational therapy departments.

Because of the widespread interest in recent years in the problem of nursing education, the data developed in this survey concerning schools of nursing will be especially interesting. Most significant is the disclosure that of the 781 schools of nursing reporting on increase or decrease in their enrollment, 569, or 72.8 per cent, increased their enrollment. Only 212, or 27.2 per cent, decreased their enrollment.

Present enrollment was reported by 1,103 schools of nursing. The total enrollment of these institutions was 61,500, an average of 56 for each school. States with an enrollment of 2,500 or more are as follows: California, 2,800; Illinois, 4,349; Massachusetts, 3,733; Minnesota, 3,073; New York, 8,701; Ohio, 3,199; Pennsylvania, 7,414. States with an average enrollment of 75 or more per school are as follows: California, 82; District of Columbia, 78; Indiana, 75; New York, 78; Rhode Island, 86; and Canada, 104.

One of the common indices of the scientific nature of a hospital's work is the percentage of autopsies to institutional deaths. The data listed in Table 5 show a total of 201,815 institutional deaths in 2,129 hospitals. There were 49,572 autopsies performed in these institutions. These figures give an average autopsy percentage of 24.5, which places these institutions well above the minimum requirement of the American Medical Association—15 per cent.

Measured by this standard and by the incomplete data returned in this survey, the 12 states which follow are defective in their scientific postmortem work: Arkansas, 10.4 per cent; Delaware, 7 per cent; Idaho, 10 per cent; Mississippi, 4.8 per cent; Montana, 13.6 per cent; New Hampshire, 3 per cent; New Mexico, 10.6 per cent; North Carolina, 12.2 per cent; Oklahoma, 9.7 per cent; South Dakota, 7.3 per cent; Vermont, 9 per cent; and Wyoming, 5.4 per cent. The following six states show autopsies of 30 per cent or more: California, 32.2 per cent; Colorado, 33.3 per cent; District of Columbia, 45.6 per cent; Minnesota, 42.2 per cent; Oregon, 30.6 per cent; and Canada, 30.6 per cent.

Careful analysis of the table shows that the states which have high percentages of autopsy are not always the states with the greatest number of institutional deaths. Examples are the District of Columbia and Minnesota, both of which have percentages of more than 40. The scientific standards of certain large institutions in these districts may influence the percentages. Neither of these divisions is within the following group of

TABLE 6—CLINICAL CLASSIFICATION OF BEDS

	General Medical and Surgical	Maternity	Tubercu-losis	Pediatrics	Ortho-pedic Children	Head Special-ties	Mental	Conta-gious	Chronic and Incurable	Total
Alabama	1,323	187	165	160	4	0	0	49	0	1,888
Arizona	458	53	452	23	0	..	148	8	370	1,512
Arkansas	976	92	550	85	11	29	13	18	52	1,826
California	8,045	1,662	3,145	758	334	159	10,812	548	1,415	26,878
Colorado	2,152	287	2,304	204	55	40	182	147	63	5,434
Connecticut	3,357	1,066	1,099	564	62	54	2,435	397	350	10,384
Delaware	140	57	64	18	0	0	0	24	0	303
Dist. of Col.	903	231	105	64	28	100	3,871	50	0	5,352
Florida	939	225	93	145	35	3	3,359	40	2	4,841
Georgia	1,762	186	672	68	84	26	42	..	..	2,840
Idaho	193	82	9	4	20	0	342	35	0	1,093
Illinois	10,059	2,670	1,612	1,385	458	164	14,717	290	1,025	32,380
Indiana	2,569	584	642	204	84	49	4,808	93	30	9,063
Iowa	2,826	613	754	242	26	20	1,658	110	61	6,310
Kansas	1,371	379	9	150	41	18	2,537	29	22	4,556
Kentucky	1,552	290	235	199	125	3	40	171	12	2,627
Louisiana	1,466	214	0	84	31	16	1,555	11	10	3,387
Maine	849	143	375	175	174	96	878	12	0	2,702
Maryland	1,911	333	269	204	2	70	4,059	0	492	7,340
Massachusetts	6,181	2,436	2,347	1,482	409	293	10,646	699	1,286	29,228
Michigan	5,529	1,532	2,359	1,057	257	360	11,238	585	2,566	25,483
Minnesota	4,399	1,178	1,648	612	282	27	3,620	377	172	12,315
Mississippi	572	78	524	17	7	13	75	7	803	1,996
Missouri	4,257	928	1,363	654	227	67	6,179	359	178	14,541
Montana	536	143	157	60	13	8	16	1	44	978
Nebraska	2,554	209	126	108	36	17	45	39	33	3,167
Nevada	75	10	0	0	0	0	300	0	0	385
New Hampshire	317	213	110	84	5	0	0	6	15	750
New Jersey	5,445	1,915	1,162	781	358	89	9,411	698	305	20,164
New Mexico	249	11	171	0	0	0	0	0	1	432
New York	18,771	5,785	4,865	2,879	553	1,834	25,818	1,041	360	62,306
No. Carolina	1,754	237	929	200	158	40	2,080	6	0	5,404
No. Dakota	668	226	5	68	0	14	4	29	3	1,017
Ohio	7,522	2,585	1,641	995	445	132	12,061	338	406	26,125
Oklahoma	1,107	143	272	79	53	2	4,676	29	26	6,387
Oregon	682	94	277	121	60	0	280	3	1,062	2,579
Pennsylvania	16,237	4,111	2,481	2,735	562	601	11,050	1,457	926	43,160
Rhode Island	2,177	464	350	87	60	37	1,704	0	0	4,879
So. Carolina	742	114	158	66	102	5	49	58	12	1,306
So. Dakota	1,010	152	90	53	6	5	17	23	5	1,361
Tennessee	2,289	184	751	298	53	15	13	35	68	3,706
Texas	3,693	573	686	278	130	94	6,723	99	65	12,341
Utah	768	177	6	27	97	9	932	22	7	2,045
Vermont	447	90	0	37	0	0	0	16	0	590
Virginia	2,164	276	546	142	36	0	3,442	7	0	6,613
Washington	1,881	431	698	163	220	49	13	81	203	3,739
West Virginia	1,193	184	475	119	56	69	1,451	15	0	3,562
Wisconsin	3,517	915	1,256	264	151	38	619	148	335	7,243
Wyoming	95	2	30	1	0	0	450	0	1	579
Canada	3,773	820	712	676	260	140	91	178	129	6,779
Totals	143,455	35,570	38,749	18,879	6,170	4,805	167,459	8,388	12,915	436,390
Percentages	32.9	8.2	8.9	4.3	1.4	1.1	38.3	1.9	2.9	100.0

states which reported more than 10,000 institutional deaths: California, 14,178; Illinois, 16,050; New York, 31,985; Ohio, 10,933; and Pennsylvania, 23,563.

These figures may be compared with those in the report of the American Hospital Association committee on postmortem examinations, submitted at the New Orleans convention. That report shows that 2,717 hospitals of all classes had 49,648 autopsies for 6,194,050 patients. Using 3 per cent as the average mortality figure, the total mortality in these hospitals was 205,820. These figures yield an autopsy percentage of 24.1—an average which correlates remarkably closely with that compiled this year. In the same committee report, it was brought out that 854 general hospitals, members of the American Hospital Association, had 24,799 autopsies for 2,388,074 patients. Using 3 per cent again as the average mortality, the total mortality is 68,642 and the autopsy percentage is 36.1.

Table 6, which shows the clinical classifications of beds for each state, requires little explanation. One would naturally expect the mental hospitals to show the greatest percentage, which is 38.3. General hospitals have the next largest number of beds, 32.9 per cent of the total. These groups together have 310,914 beds, or 71.2 per cent of the total number of beds classified in this division of the study, 436,390.

Readers interested in the ranking of particular states in these classifications—or in any of the other items covered in this survey—may find the information in the tables. These tables do not show complete figures for all hospitals in each state, but they do show the figures for representative numbers and afford an acceptable cross-section. Because of the typical nature of the institutions, the findings are an indication of what studies among all similar hospitals would show, at least so far as the averages are concerned.

HOSPITAL SERVICES FOR WELL CHILDREN

WHAT THE HOSPITAL PROVIDES AND HOW ITS USEFULNESS CAN BE BROADENED

By LeRoy A. Wilkes, M.D.
Director, Division of Medical Service, American Child Health Association

For the purpose of this discussion, attention is to be centered upon the provisions found in the hospital which are not usually assumed elsewhere, that is, good organization, adequate equipment, and quarters especially designed for specific purposes.

This discussion suggests the great potential advantages which the hospital offers to the public, to the public health administrator, and to the medical profession itself, for the practical application of proven preventive measures.

Preventive medical practice or health service should begin even before birth, in the prenatal clinic, and be continued throughout life. Periodic health examinations afford an opportunity for the earlier discovery of diseases and defects. Individual advice and demonstration as to preventive measures beneficial to the patient are most effective.

The idea of a hospital as a health center as well as a curative institution should be established in the minds of the people.

Supervising and protecting the health of infant, preschool and school-age[1] children are fundamental in a preventive medical program. Every general hospital should make available such a preventive service for private, semi-private, and charity cases. In the semi-private class are those children who can be cared for in groups at low cost per capita, as in immunization against diphtheria.

This seems to be the next logical step in the development of hospital service if the hospital is to play its part in the expanding health program of the community.

As a demonstration the public health departments have done yeoman service in initiating and developing preventive medical services for children. The hospital can put its facilities at the disposal of private practitioners for those patients who can pay for such service.

[1] I have included the school-age group in the hospital health center program because while the public schools are at present doing a certain amount of medical inspection of the pupils on a rather extensive scale, it is a very exceptional thing to find a "health examination" being conducted in schools which could be considered worthy of the name. The medical work in the public schools began as a frank inspection to discover early signs of contagion and has not generally progressed in technique beyond this inspection stage. The schools are for the purpose of education, and to call the present day medical procedures in school "health examinations" is unfair, and decidedly poor education.

The hospital and the physician are closely allied in curative service and they must also be allied in preventive work. An economic health preservation service requires good equipment and organized effort. Such hospitals as are ably administered by executives with business training and experience can provide complete service. The economy and efficiency of handling individuals requiring similar treatment at specific hours, in especially designed and equipped quarters and with adequately trained assistants, has repeatedly been demonstrated. The hospital authorities hold the respect and confidence of both the public health officials and the private practitioners and can lead the way in showing how the private physician can give preventive services to his patients at reasonable cost and thereby extend his usefulness and relieve the health department. Such preventive service will be mutually acceptable and beneficial to patients, physicians, and public health executives. The idea of specialized equipment and organization for the private practitioner is not new.

The present tendency on the part of physicians to overspecialize is an effort in the direction of getting services for similarly affected persons. Specialized equipment and quarters are essential to economy and efficiency, and all this the hospital provides.

The general practitioner in the smaller cities and towns will find these specialized facilities in the hospitals in his locality, and will soon realize that the organized work of a hospital will greatly increase his efficiency and enable him to more satisfactorily serve a greater number of patients in a given time. Thereby the patient will secure better service at lower cost and the income of the physician will be increased. The hospitals have here an enormous opportunity and obligation in the field of preventive medicine.

ORGANIZED PREVENTIVE MEDICAL PRACTICE IN COMMUNICABLE DISEASE

Organized service in hospitals is especially adaptable to such preventive measures as vaccination against smallpox, and inoculations against diphtheria, typhoid fever, scarlet fever, and colds. Large numbers of patients can be vaccinated and inoculated at the hospital by the physician in an hour's time when all the facilities are made ready at the hospital before he arrives. The vaccines and sera on hand here are kept fresh and potent until they are needed. Private patients can be booked in groups by their physicians for definitely appointed hours at the hospital. A service charge can be made to the physician by the hospital.

It has long been the custom in the public schools to gather children together for immunization at appointed times. It has been repeatedly demonstrated that a single doctor and nurse can in an hour protect 100 children against diphtheria.

Against such efficient and effective procedure the private practitioner has often vainly protested, instead of recognizing and adopting the principle of organized care of patients by appointment in groups for specific services. Here is the opportunity of the hospital to come to his aid and offer to him the facilities which he requires for such work, and to demonstrate to him the economy and efficiency of using organized service and special equipment for the preservation of the health of his patients as well as for the cure of disease.

HEALTH EXAMINATIONS

The value of periodic health examinations lies in the significance of the changes noted at each subsequent examination as interpreted by the family physician, rather than in the findings at any particular examination, important as the latter may be at any time.

The health examination, to be of greatest value to the patient, should be held at a place where the patient can conveniently have x-ray and laboratory tests, as well as such other aids as medical science offers to the examining physician. Too often patients are put to great inconvenience in being referred to several different addresses for supplementary tests and special examinations. The tests are often made on different days, and many patients get discouraged, and fail to have the examination completed. The Medical Arts buildings in the larger cities are becoming popular, in part due to the convenience they afford. In the smaller cities and towns the hospital can offer similar facilities to the physicians of the community. Such an arrangement is in effect in Hanover, New Hampshire.

Offices furnished and equipped could be rented to physicians for specific hours and arrangements made for the use of special equipment needed only occasionally, such as oxygen and nitrous oxide. Thus the medical cost is cut for both physician and patient.

RESEARCH

Research should be carried on in the hospital to develop aids in the measurement of health status similar to those now available to determine the degree of illness.

It can now be determined with reasonable accuracy how ill a person is, but there are today no satisfactory criteria for determining the degree of health possessed by a person at any given time. If reliable measures of variation in the degree of health can be found, periodic health examinations will show them as well as signs of defects or disease. Reliable measures of the rate of growth and development in children taken periodically as part of the health examination will give valuable data. There is a fertile field for research in biometrics, biochemistry, physiology, and

kindred subjects relating to growth and development. Already such research is being conducted in the University of Colorado medical school and in other universities.

RECORDS

Hospital records will need to contain two types of data which are usually quite distinct, that is, clinical data and research data. Clinical data are not sufficient for research study and the form and content of the record must be approved by both the clinician and the research person in order to be of most value to the hospital in this broader field of service.

Menorah Hospital Dedicated

Menorah Hospital, Kansas City's newest institution, erected at a cost of $1,250,000, was dedicated on August 29. This hospital, sometimes referred to as the Jewish Memorial, is one of the finest equipped medical structures in the United States and is the culmination of years of dreams, hopes, determination, plans, and work by a group of Kansas City's leading Jews. The cornerstone was laid by Rabbi Harry H. Mayer.

Ninety-five per cent of the cost of construction of this hospital was contributed by the Jewish people of the city, yet Menorah will minister to the suffering of all creeds.

Miss Beryl B. Anscombe is superintendent of the institution.

WINDOW ACCIDENTS

By Asa S. Bacon
Superintendent, Presbyterian Hospital, Chicago

The telephone on the superintendent's desk rang and an excited voice said, "Mr. X. just jumped out of the window in Room R. and his body lies in the court." Nothing gives a hospital superintendent a greater shock than a message of this kind. As the height of the modern buildings has increased so has the mortality from window falls. The tall buildings have appealed to many persons of suicidal intent as a quick, painless, and sure method of self-destruction. These men and women probably account for more than half the fatalities. Of course many of them would find some other means to their purpose if they were denied the convenience of the third or the forty-third story window; on the other hand, others would doubtless have their purpose blocked until such time as a normal outlook on life returned.

But how about the accidental falls, for there are more of these than one realizes. Dizziness from looking out of a high window is not uncommon. Neither is an uncontrollable impulse to jump, experienced by even the most normal person at times. This is not, strictly speaking, suicide. It is momentary vertigo induced by the great height and open window and should be classified as an accident. Then there is a large percentage of pure accidents. A person feels slightly ill or dizzy in a hot room, goes to the open window, and falls out. Others, especially hospital patients, due to their illness and confused minds, mistake the open window for a door. There are children and old people who are not sufficiently alert to avoid the danger of the open window. Deaths from window falls, both accidental and suicidal, have always been a source of worry to hospital authorities. Despite the closest supervision patients whose mental and physical faculties are impaired will go to a window and open it with a vague idea of finding relief from pain and discomfort and probably fall out. Others are depressed and take the window as a speedy means of ending their suffering. Nurses and doctors should always be on the lookout for the latter and at the slightest hint of self-destruction in the patient's thoughts, bars should be placed on the windows.

Sometimes the hospital patient becomes weary of lying in bed and is overtaken by a wave of homesickness. The result is an attempted escape from the institution by way of the window, stairs, or fire escape. There have been numerous instances of this; sometimes the individual actually

succeeds despite the vigilance of the nurse and lack of clothing, even in midwinter.

While it is difficult to get accurate figures a special tabulation of deaths from falls in 1928, recently made by the U. S. Census Bureau, shows a total of 530 deaths from window accidents. The National Safety Council also has very interesting information as to the death rate from falls. While the classification does not sufficiently classify them so as to determine the actual number of deaths due to window falls it shows a slight increase in the total deaths from falls of all kinds since 1927. It also shows the wide range of ages. Up to the age of forty they are less than 10 per cent of all accidental deaths. From forty to sixty years they range up to 15 per cent. After this point they advance rapidly.

In compiling the number of deaths from window accidents reported in the Chicago newspapers for the year ending July 1, 1931, which total ninety-six, I find that 55 per cent were persons from twenty to forty years of age. Compare this 55 per cent with the 10 per cent death rate due to falls of all kinds of persons from twenty to forty years of age. I think this indicates that deaths from suicidal intent are more numerous among those under forty.

The number of window fall deaths reported in the Chicago newspapers are deaths that happened in various cities (not all Chicago accidents). I have classified them as follows:

Hotels	36	Children	4
Apartments	24	Men	50
Offices	14	Women	42
Hospitals	10		
Homes	7		
Clubs	3		
Dormitories	2		
	96		96

The ages range as follows:

10 years of age and under	4
10 to 20 years of age	4
20 to 30 years of age	22
30 to 40 years of age	31
40 to 50 years of age	17
50 to 60 years of age	9
60 to 70 years of age	5
Over 70	4
	96

Twenty-six of the ninety-six were suffering from some illness which, no doubt, contributed to their thought of taking the window jump, while fifty-one were frankly suicidal and nineteen were accidental.

How can window falls be prevented? By bars? Yes, but everyone resents bars, even the normal and healthy. In hospitals they tend to further depress the patient.

When constructing a new building it is very easy to install windows that prevent accidents, without the installation of bars. I had such windows installed in our new wing seven years ago and have not had a single accident from rooms so equipped. These windows are inexpensive and are not patented. The upper and lower sashes are divided into sections so that by breaking a glass pane it does not permit a large enough opening for a person to go through. A fly screen, with divisions, is locked on the bottom sash and works up and down in a groove on each side. This prevents jumping out of the window opening when it is up. The window washer is the only person who has the two keys it requires to unlock the screen from the window. Architects, building consultants, and window manufacturers have given a great deal of time, thought, and money to solve the problem of light and ventilation but very little has been done to prevent window accidents, and most of these deaths are preventable if windows are properly constructed.

The Hospitals in West Virginia

The annual maintenance cost of fifty-four hospitals and sanatoria in West Virginia, exclusive of state supported institutions, is $3,783,000. The hospitals in this state in 1931 admitted 78,262 patients and treated 232,574 in their out-patient departments. West Virginia hospitals pay each year more than $25,000 in state, county, and district taxes. Thirty-eight of the fifty-four hospitals pay taxes, while sixteen are tax-exempt.

WHAT PLACE HAS RESEARCH IN THE HOSPITAL?

By W. J. Merle Scott, M.D.
Associate Professor of Surgery, The University of Rochester School of Medicine and Dentistry, Rochester, New York

Nearly everyone has heard the remark about some large hospital, that the patients are experimented upon there. It is chiefly said about teaching hospitals. But no institution where disease in patients is carefully studied by the staff is entirely immune to this form of criticism. What basis is there for it?

Every instance of disease is an experiment of nature, an alteration of the normal function or structure of the body. No two such modifications are exactly alike but groups of them have certain fundamental similarities. Historically, the first method of medicine as a science was the classification of these alterations, fortuitously produced by nature. This has remained from the earliest records and will always continue to be an important method, essential to enable past experience to serve as a guide in treatment and prognosis. Classification when used alone, however, soon produces a non-progressing science. This is as true in medicine as in the other sciences. However, the elements of disease are subject not only to classification but also to scientific analysis by altering the conditions under which they occur. We are particularly indebted to Claude Bernard[1] for the application of this method to the study of disease. It is the essence of research in medicine. Its fundamental characteristics are two-fold: first, the conception of an hypothesis to explain certain previous observations and second, testing the validity of such an hypothesis by observing the results of a critical change in the conditions of the disease. Thus every time a drug is given a patient for a preconceived purpose a therapeutic experiment is begun. If its effect is carefully observed and the result used to control the hypothesis on which it is given, the experimental method has been used. This is a very simple application of it but illustrates the principle.

We are now ready to return to the original question. We see that in producing disease nature carries out a hazardous experiment. For us the question is, What use can we make of this to increase our effective knowledge? Shall we merely classify disease and apply empirical therapy? Or by clinical research shall we learn more about the underlying mechanism in order eventually to prevent or treat the condition more effectively? In

[1] Bernard, Claude: An Introduction to the Study of Experimental Medicine. MacMillan, 1927.

many hospitals investigations into the causes and best treatments for various diseases are constantly going on.

ADVANTAGES OF RESEARCH

There are three important advantages of research to the hospital, namely, first, practical benefits to the patients studied; second, the advancement of medicine; and third, the creation of an inquiring attitude of mind on the part of the staff.

1. Clinical research furnishes a better background for understanding the various phases of the disease while its study is in process. The patients themselves, if moderately intelligent, appreciate this fact and readily cooperate in the investigation. In some instances practical benefits are immediately available in the handling of the conditions being studied. As an illustration of this from my own experience, in studying certain vascular diseases of the extremities a simple test was devised which enabled us to determine the rôle of sympathetic vasoconstriction in the local circulatory deficiency. This not only threw light upon the underlying mechanism but assisted us greatly in determining the treatment for the patients studied. Illustrations of such immediate therapeutic or diagnostic benefits from clinical research could be multiplied indefinitely. However, in one sense these may be considered by-products of the method.

2. The advancement of our fundamental knowledge is the chief aim of the experimental method. Far-reaching, practical benefits are bound to follow any important contribution to the science of medicine. For instance, Lister had been studying the problems of suppuration in wounds for years. He did not subscribe to the nearly universal myth of "laudable pus." Pasteur's demonstration of the cause of putrefaction appealed to him as the key to the problem. And both a new chapter in our knowledge of infected wounds and a new era in the practice of surgery were inaugurated. Lister's discovery of the cause of wound infection stands as one of the chief glories of the Glasgow Infirmary. Although few pieces of research lead to such brilliant contributions as that, yet the rapid progress in medical practice in the last two decades has been almost entirely the result of the experimental method. The hospitals where such clinical investigations into the cause, diagnosis, and treatment of various diseases have been pursued deserve much credit.

3. The most evident and a most important advantage of research to the hospital is its stimulating effect upon the staff. The experimental method cannot fail to engender an inquiring attitude of mind on the part of all of those who partake in it. This is particularly obvious by its absence in institutions where there is no interest in clinical research. That mental alertness which is necessary for the best care of patients is stimulated by

investigation of the unknown or partly known. Disease daily presents unsolved problems of fundamental importance, a challenge to everyone confronted by them. The research of today becomes the practice of tomorrow. Without the investigative point of view, the practitioner of medicine becomes out-dated in a very short time.

In the last ten years such clinical research in the field of surgery alone has resulted in the following: preöperative preparation of exophthalmic goiter patients with iodine; postoperative hyperventilation to reduce the incidence of pulmonary complications; the roentgenographic visualization of various internal organs with the aid of contrast media, such as cholecystography, ventriculography, intravenous pyelography, outlining the bronchial tree, etc.; the development of electrothermal methods in certain operations for the control of bleeding and the sealing of lymphatics; the measurement and the elimination of sympathetic overactivity in such conditions as Hirschsprung's disease, vascular diseases, etc.; the control of the inorganic metabolism in intestinal obstruction; and in general the emphasis on function rather than merely on structure. This is but a partial list of the important contributions to surgical procedures in the last decade, yet who would be willing to practice surgery without their benefit?

The hospital is not the only place where such clinical investigation can be carried out. There are many notable examples to illustrate this fact. McKenzie's studies of irregularities in the heart beat furnish a particularly good one. An inquiring mind, even isolated and with very simple physical equipment, can force nature to disclose some of her secrets. But the modern hospital is the most favorable place for carrying out clinical investigation because it presents a combination of important facilities, namely, control of the patient's physical environment, full records, equipment, and coöperation and assistance from other members of the staff. These are all helpful and frequently necessary for the successful conclusion of a clinical research. Furthermore, the concentration of the cases in one place saves the valuable time and effort of the busy investigator-clinician. Due to all these factors, it is very difficult today to carry on significant clinical research outside of a well run hospital. The size of the hospital is not the important factor, but rather the character of the clinical facilities and the association of inquiring minds.

DANGERS OF RESEARCH

There is one axiomatic rule of clinical investigation: nothing must ever be done that will harm the patient. No matter how valuable the information to be derived, this rule should never be broken. On the other hand, it must be recognized that there is often danger inherent in

the disease itself. Consequently, if the probable benefit to that patient is greater than the risk incurred, then the procedure not only is justifiable but is indicated. A simple illustration of this was the treatment of acute appendicitis shortly after Fitz's demonstration of its cause. Appendectomy at that time would be properly described as an experimental procedure entailing some risk. Many of the medical practitioners of that day deplored the acceptance of that risk but thoughtlessly assumed the graver risk of rupture and peritonitis. Today this principle of protecting the patient from harm in any clinical investigation is quite uniformly adhered to. In an earlier day, before clinicians had realized the importance of the experimental method, occasionally men trained in the laboratory alone would carry out some research on patients and subject them to dangers that they did not recognize on account of their lack of clinical experience. Such a mistake is unjustifiable today; there is ample opportunity now for the application of discoveries in the basic medical sciences to human disease under the direction of well qualified clinicians who are also experienced investigators. In fact, many of the recent brilliant advances in medicine have been achieved by this type of coördinated endeavor in which discoveries made in the laboratory have resulted in the solution of a baffling clinical problem. At times both phases of the work have been carried out by the same investigators, more frequently two separate groups have been responsible. The control of the carbohydrate metabolism by insulin in the diabetic and the influence of liver in pernicious anemia are but two outstanding examples. The constant advances in the basic medical sciences, pathology, physiology, chemistry, pharmacology, etc., offer a fertile field for their application to many perplexing phases of disease. Such investigations must be carried out by clinicians who are also well trained in the experimental method.

Another danger of clinical research is that the investigator becomes so involved in the pursuit of his problem that he neglects the care of the patient. This is a feature that the neophyte must carefully avoid. The well trained clinician could not possibly forget the well-being of his patients. In fact, the problems that he is investigating have interested him because they arise as obstacles in the course of his clinical duties.

THE COST ACCOUNTING OF RESEARCH

Granted, then, the value to the hospital of clinical investigation, how can it be financed? Does it cost more than it is worth? There are all degrees of elaborateness to a research problem. Other things being equal, simplicity is a decided virtue here, as elsewhere. A costly program is not necessary to gain for the hospital those advantages of clinical investigation most important to it, particularly that lack of satisfaction with the super-

ficial on the part of its staff. In fact most of the elements in such a program that involve expense are already provided by the hospital. These are: first, a thorough history and physical examination of patients; second, the usual laboratory studies; and third, well kept records. Many important clinical problems require the outlay of no extra funds for their study. If expensive items such as many additional x-ray films or much technical assistance is necessary exclusively for research purposes, such should not be charged to the general hospital costs. That particular investigation should be undertaken only if a special fund can be provided for it. There are several sources of such funds to assist clinical research. If the investigation is being carried out in a university hospital a certain percentage of the department budget is usually and properly available for research. The hospital trustees may set aside a certain amount as a contribution to the improvement of the hospital's service to the community and to medical progress. Wealthy individuals, particularly those who have experienced a serious illness themselves or in their families, often take pleasure in recognizing their debt to scientific medicine and the necessity for further knowledge by supporting medical research. Several private foundations as well as the Scientific Committee of the American Medical Association, the National Research Council, and other agencies provide financial support for certain studies under the direction of well qualified investigators. I wish to emphasize the fact, however, that the most valuable clinical investigation is not necessarily the one using the most complicated equipment. Indeed intricate apparatus introduces additional sources of error and should be used only when simpler methods do not furnish the necessary data. Some investigations become so involved in paraphernalia and methods that they never produce results.

The most important feature in clinical research is a clear conception of the problem involved, together with the visualization of an experimental test which will throw light upon the underlying mechanism. This element, so essential for the carrying out of clinical investigation, is costly, not in money, but in human effort, training, and ability. It cannot be bought as a commodity but is obtained by affording opportunities to those individuals possessing its attributes and by instilling the investigative spirit and methods in the resident staff. Consequently if research is of value to the hospital those experienced clinicians genuinely interested in investigation and possessing proper training in the experimental method should receive the moral support of the trustees and administrators of hospitals. Clinical opportunities should carry with them responsibilities both for the best practical care of the patient and for progress in our knowledge. Neither of these aims can be achieved without clinical research.

HOSPITAL LIBRARIES[1]

By ELIZABETH POMEROY
Chief, Library Section, Medical and Hospital Service, Veterans' Administration

A SPEAKER WAS ONCE ASKED if he knew what it meant to go before an audience. His reply was, "No, I spoke before an audience once but most of it went before I did." I shall profit by that speaker's experience.

If I did not feel so thoroughly convinced that the subject of hospital libraries should be brought before this association, I would hesitate to take part in this program. I can't help remembering the boy whose father said to an influential citizen, "I want you to find a government position for my boy." "Is he intelligent and a hard worker?" he was asked. "No; if he was, I'd use him on my farm," was the answer. Being a government librarian—and a hospital librarian at that—well, that's a combination hard to live down! Fortunately flanked with a goodly number of my kind, however, at this conference, and believing so thoroughly in my subject, I venture to negotiate the handicap.

How shall we approach this almost unexplored hospital library field? We may pass over the early history lightly. With the striking exceptions of McLean Hospital at Waverley, Massachusetts, the Massachusetts General at Boston, and the work instituted by the Iowa Library Commission, very little had been done in the United States prior to 1918. Then the war work of the American Library Association, starting in the camps, naturally and gradually extended to the hospitals, and so evolved the Army, the Navy, and finally the Veterans' hospital libraries.

During the war, sentimentalism entered somewhat into our considerations in extending camp library service to hospitals. That element still has its place perhaps, but if it were the only vitalizing force, the work of providing literature for hospitals would be left to volunteer groups to an even greater extent than at present.

I would not for a moment minimize the good work, so motivated, which is being accomplished. It will be found, however, that where such efforts are meeting with success there is always a person of vision and intelligence directing the activity, who, if not a librarian by training, has many of the essential qualifications. When there is not this type of guidance, hospitals become dumping grounds for anything in print.

It's a pleasing contribution to the all's-well-with-the-world feeling when, as a donor, one may imagine himself on a par with Florence Nightingale

[1]Delivered at the third general session of the American Library Association conference at Yale University, New Haven, June 25, 1931.

and at the same time dispose of all the surplus literature in the attic. Personally, it is my opinion that as a hospital librarian for a few years in Chicago, I did more than any mayor has done since to clean up that city!

After enduring avalanches of paper and ink—often nothing more—it is small wonder that some hospital executives and nurses have had to be won from an attitude of tolerance to one of acceptance when library service is offered their patients. In such a situation, their indifference, if not definite opposition, is discouraging to the librarian who contemplates organizing this work in the hospital. One hesitates, fearful of trespassing in the hospital field where all must tread lightly and with caution. Not feeling sure the service will be acceptable to the hospital and with a multitude of demands on time and funds, action by the city library is frequently postponed.

A relatively small number of librarians have sought the opportunity and realized the pleasure and satisfaction of instituting hospital service. They have capably met their responsibilities. In too many instances, however, public libraries have left the work of organizing hospital libraries to the hospital authorities, without offering assistance.

The Hospital Libraries Committee of the American Library Association has for some time been putting forth efforts to determine the extent of hospital library service. To add to this information, the chairman of the committee wrote early in the year to each state and provincial Library Extension Agency of the United States and Canada. Replies, greatly appreciated, came from most of these agencies, which in these days of many questionnaires seems hopeful for the interest in the work. Some had little to report; few had much, but the tone of the letters revealed an evident awareness that libraries are only on the frontiers of hospital work, and an apparent desire to see what lies beyond.

Omitting the hospitals of the Federal Government in this consideration, twelve states seem to have no hospital library activity, sixteen either have the movement on foot or are doing a little work here and there and, with one exception, in no organized and systematic way. Twenty states have two or more cities each, in which hospitals receive service from their public libraries or from libraries operating as independent units within the hospitals. A few of these twenty states have several cities doing a reasonable amount of work in this branch of library activity. Some of the hospitals now conducting independent libraries were helped by city libraries to establish the work.

California seems to be covering considerable hospital ground through its county library system. Reports from some states indicate that the work is carried on under the public library extension department, in some cases

with volunteers supervised by an assistant in the department and in others with a trained hospital librarian as a member of the regular library staff. Some report that the hospital furnishes the books and transportation for the librarian who is attached to the library staff, while others state that the library supplies the books, and the librarian is on the hospital staff. The situation in Canada seems to show the same irregularity.

In any enterprise there is danger of becoming overstandardized. Hospital libraries will have no worry on that score for some time.

The heterogeneous methods used make it difficult to sum up and report the general situation. Results cannot be tabulated and carefully classified and catalogued according to the methods that are so dear to the heart of the librarian. However, in it all there is a hopeful note to indicate that gradually the way will be found to make adjustments so that the needs of particular localities will be met.

It seems surely that, conscientious as we know librarians to be, some way will be provided by the six thousand and more public libraries of the United States to serve the approximately fifty-five hundred hospitals not operated by the Federal Government which do not maintain their own libraries. There is an opportunity here to reach a potential hospital population of more than seven hundred thousand persons.

There are three good reasons why all librarians, particularly those connected with public libraries, should be interested in hospital library development. First, the hospital offers to the public library an excellent opportunity to extend its adult education program; second, the hospital library affords one of the best avenues through which friends may be gained for the public library; and third, through bibliotherapy, or treatment by reading, the public library shares in restoring and promoting the health of the community. Considered, then, in this order, how does the hospital offer to the public library the chance to extend its educational program?

We are agreed that in this busy world time for serious reading is lacking. Even librarians, traditionally students, have difficulty in finding time for thoughtful reading. The patient in the hospital has so much time he doesn't know how to occupy it. Then isn't this just the place to sow the seeds of adult education?

Certainly the patient needs a sane philosophy of life if anyone does. We are told that the purpose of education is "to render a man content in solitude and calm in adversity." Almost any of us would feel that adversity had overtaken us if we were obliged to enter a hospital, and contentment is most necessary to recovery. In the hospital the two purposes—adult education and therapy—may well blend into one.

Dr. Gerald B. Webb in a wonderfully illuminating and scholarly address

to the members of the Association of American Physicians on "The Prescription of Literature" has this to say in regard to reading:

"The most distressing fact of present-day life is that as the world becomes smaller, competition becomes keener and the time allotted to liberal studies becomes correspondingly shorter. For this reason it may often transpire that a long illness may give a man the first chance in his adult life for leisurely reading and thinking. Thus a confinement to bed, by releasing a man from the pace of the world around him, can prove a blessing in disguise."[2]

He goes on to say that our age militates against the man who would take time for creative thought and that therefore anything that contributes the leisure for his development in this respect should be cherished. "I know many professional men," says Dr. Webb, "and among them not a few university professors, who could greatly profit from a half year's stay in bed!" He adds that it was Huxley who exclaimed to a friend, "If I could only break a leg, what a lot of scientific work I could do."

A footnote in this published address of Dr. Webb's calls attention to the case of a Russian chemist and composer who could find time to compose music only when indisposed. His friends, therefore, had the habit when meeting him of expressing the wish, not that he was well, but that he was ill! This situation has its counterpart throughout the hospitals of the land.

An illustration comes to mind of a patient who entered a southern hospital for an illness requiring rest. In his small home town he had been supervising the musical programs in local and school affairs. He used his time while in the hospital to read the lives of the composers and to study the history of music and the effects obtained from and produced by music, etc. He commented on how worthwhile his illness had been. Time for study had previously been lacking.

In 1929 the San Francisco *Chronicle* offered a prize of $1,000 for the best essay on the industrial history of California from 1850 to 1906. Fifty-eight persons competed in this contest. The first prize was won by a tuberculous patient in a veterans' hospital. For nine months, he spent an allotted time daily outside his regular rest-hour and treatment periods in writing this essay, the material for which was procured by the hospital librarian. This example is cited to show what a patient handicapped by tuberculosis actually accomplished, having sufficient determination and the services of a capable hospital librarian to provide the necessary material.

An achievement of this nature not only restores the patient's self-confidence—itself of therapeutic value—but it is also a definite, constructive piece of library work. The hospital is full of such opportunities.

One value which patients themselves place upon hospital libraries is that through them they are kept in touch with the outside world and reminded that they are citizens as well as patients. One man of the mental type in

[2]Webb, Gerald B. The Prescription of Literature. *Transactions of the Association of American Physicians*, 1930, vol. 45, p. 13.

a large hospital where only this class of patients is treated said that he appreciated the library because he felt that when reading he was in touch with those having normal minds. (Some of us who review new books constantly may lack his implicit faith.)

One hospital librarian told of two long-time patients who vied with each other in reading the Harvard Classics. One read the entire set, beginning with volume one, and completed it in fifty-four weeks. The other used the index volume and Drinkwater's *Outline of Literature* as a guide.

A well-selected book often opens up a new field to just an average reader. *Elizabeth and Essex* is an example. Librarians say that invariably readers of this volume wish to pursue the subject further. Hackett's *Henry the Eighth* is perhaps suggested, which may, in turn, lead to dusting off Strachey's *Queen Victoria,* and so on. Some patients following this bent go so far as to read Shakespeare's plays of the same periods and, with an English history, verify the information gleaned. Similar cases in unlimited numbers might be related.

I do not wish, by these illustrations, to convey the impression that hospitals are at all likely to be turned into educational centers, nor would this be desirable. For therapeutic reasons, a great deal of light reading should be encouraged in many cases. The librarian will not urge serious reading upon the patient—or suggest any at all—unless she knows it is perfectly safe to do so.

Speaking for veterans' hospitals at least, the average percentage of non-fiction read is as large as the average circulated by public libraries in similar localities. Take, for example, the veterans' hospital at Oteen, North Carolina. During the year 1930 the approximate total book circulation to patients and employees of this hospital was forty-six thousand—a monthly average of thirty-eight hundred, with an average non-fiction circulation of more than 30 per cent. The average patient population for the year was 577, with a per capita book circulation among these patients of 5.8. In addition there were many periodicals constantly in use, of course, and also books from other sources.

With the book circulation in some of the larger veterans' hospitals running from thirty-five to fifty thousand annually and with more than fifty of these hospitals open, each with its own librarian or library staff, the opportunity for adult educational extension in these institutions alone is great. Add to these the hospitals of other Government departments and those of city, county, and state either receiving or capable of receiving library service, and it will be seen that this field is one the public library must regard seriously in any future extension plans.

In addition to its importance as an avenue for furthering adult educa-

tion, the hospital library is constantly making friends for the public library. It is small, making possible a friendly and informal atmosphere which cannot prevail in a large public library. This lends itself easily to making the timid, as well as the assured, reader feel at home among the books. And when the patient is too ill to leave his bed and reading material is taken to him, there is no doubting the friendly spirit created. This continues while he is in the hospital and when he leaves he expresses regret that the library service must be relinquished. It would be interesting to know how many of the new borrowers who present themselves at public libraries are sent there by hospital librarians.

A patient in a middle western hospital in looking over the book-cart said, "I'm going to be in bed for two or three weeks and I want something to read—I don't know what to get—I haven't read *anything* for fifteen years." It's a fair guess he would have read nothing for fifteen years more—no matter how many times a day he passed the doors of the public library—had he not discovered the pleasure of it while ill, and not then if the service had been less accessible. With a long enough stay in the hospital and with the right type of hospital librarian to help him, he will get the reading habit and, as so many have done, when leaving the hospital will inquire about his chance for getting books at his local public library.

A patient is recalled whose warped mind expressed itself in a twisted body. He was disdainful of all conversation, believing himself the only "intellectual" in the hospital. The librarian succeeded in winning his confidence by daring to out-radical his own ideas. He was forced to admit that perfectly conventional people could admire literary excellence in radical works. He was gradually introduced to authors who appealed to him and learned to enjoy the books he had formerly refused to open. His physical condition improved as his mind became more normal and he afterward said that the library gave him his start toward recovery. He and many others who likewise have benefited from their hospital experiences will remain friends of libraries wherever found.

It seems logical to conclude, then, that the hospital offers to the public library, first, the chance to extend its educational program, and second, the opportunity to gain friends. What about the part it may take in helping to restore and improve community health? We are considering the curative point third in this discussion, but it should be emphasized that for the hospital librarian the therapeutic side of the work always has first place.

We may or may not work in libraries but we all want to live among healthy, normal people. The sick may not indiscriminately be classed as mental patients but certainly a sick body does incline to have a sick mind.

More and more we are coming to know that no definite line of demarcation can be drawn between the physical and the mental in man. There may be patients having no organic disease who none the less suffer all the symptoms, if suggested to them. And if the symptoms can be suggested in such cases, the cure, or alleviation at any rate, may likewise be, if we prescribers of literature are wise enough and tactful enough and patient enough to do it.

I once heard a psychiatrist of good standing say that "if one knows the novels that appeal to a person, one can analyze that person's difficulties, provided he knows the novels." In that sentence, it seems to me, is the essence of the hospital librarian's profession, especially when dealing with recognized mental patients.

Clifford Beers, in that invaluable record of his mental illness, "The Mind that Found Itself," tells of how, while suffering acutely, he resumed his habit of reading. He said that he began reading not only newspapers, but such books as were placed within his reach. Yet had they not been placed there he would have gone without them, for he would never ask even for what he greatly desired and knew he could have for the asking. He states that whatever love of reading he now has dates from that time. He later speaks of finding in a bookcase in his ward old copies of such standard magazines as *Blackwood's, Scribner's,* and the *Atlantic Monthly,* all dated a generation or more before his first reading days. "Indeed," says Mr. Beers, "some of the reviews were over fifty years old. But I had to read their heavy contents or go without for I would not yet ask, even, for a thing I desired." He makes special mention of the room of one patient that contained thirty or forty books and how he walked past this patient's door time and again not daring to ask for a book or to take one. Finally, getting desperate, he summoned courage to take them surreptitiously and he confesses that it was usually while the other patient was attending the daily chapel service that his library became a circulating one.

Present day physicians recognize the definite therapeutic value of properly directed reading. Librarians are the authorized public dispensers of literature and cannot deny their responsibility for its dissemination among the sick as liberally as among those able to get it for themselves. By shouldering this responsibility, as has previously been pointed out, we enlarge the field for educational extension, we make friends for the public library, and we assist in restoring and maintaining the health of the community.

In the few minutes remaining I should like briefly to view this subject as it appears to many public libraries and see whether there are any practical suggestions to be offered.

The lack of funds is an ever-recurring problem and in these days of retrenchment, it is easy to think we can't undertake anything new. Anyway, we may argue, we've never been *asked* to do anything for hospitals, why start that now, that's the doctor's business. Yes, it is the doctor's business, but so is the school the superintendent's business, and the factory the industrialist's. We do not wait for them to invite us to place libraries in their institutions. On the contrary we congratulate ourselves on the extension of library influence when the use of library books in these places warrants the establishment of a special department or branch in charge of an assistant.

Why then do we dissemble when it comes to hospitals? The library belongs to all these groups and they are equally entitled to its service. It is admittedly the work of librarians to conduct it—in one institution as much as in another.

Hospitals are places where any of us may at some time unfortunately find ourselves detained. If only from a selfish viewpoint, then, we should interest ourselves. The industrial workers and the students when in health may, with a strong enough urge, go to the public library and obtain their own reading material but the incapacitated are, more often than not, further penalized by forfeiting library service entirely.

Public libraries delay taking any steps or showing any inclination to initiate hospital library work because the money to carry it on is not in hand, when intelligent interest might often go far toward gaining the necessary support. Those who have had experience in this situation say it is less difficult to secure funds for this branch of library work than for almost any other. We know that service of any nature to the sick makes a universal and humane appeal. The library that includes hospital service in its program reinforces the confidence of the public in its integrity. This may well react to the benefit of its other activities.

Surely hospital libraries help to make of patients better citizens and this very fact comprehends their willing support of the institutions contributing to good citizenship.

A state hospital in Missouri has recently organized a library that might well be mentioned here. The superintendent was eager to get the maximum benefit from the five hundred dollar appropriation made. Good copies of popular books were purchased reasonably from department stores, the state library lent some material and the St. Louis public library donated a number of used books which had been discarded as not warranting further expense for repair. However, as an occupational therapy project in the hospital they were put in usable condition by the patients. Gifts from other sources brought the collection to 1500 volumes and subscriptions to

twenty-six magazines were placed. The library is kept open three afternoons a week, with the plan in mind to employ a full-time librarian when funds permit. The physician in charge in a letter describing the organization of the library said: "Our patients seem to derive so much pleasure and comfort from it and in many cases we have noted an improvement in their mental condition since they began using the library. Several cases are outstanding in which the patients have evidenced no interest in anything prior to this. It is our hope to extend its scope and improve the service to patients. We believe it to be of considerable importance to their welfare."

It may be interesting to know that in a monthly circulation of 602 volumes among these 1700 nervous and mental patients, biography stands second to fiction in popularity, with travel and natural science equally sharing third place. The different classes of books issued to employees of the hospital rank in exactly the same order as those read by patients, namely, fiction, biography, travel, and natural science. Fifth in order with patients stands religion, while literature takes this place with the personnel.

It seems to me that the ideal to strive for in the hospital library movement is for organized sponsorship by the public library to the end that as the work develops it may become recognized as a definite department of the hospital, with a resident librarian in charge when the size of the hospital warrants her full-time service. There is no question but that the librarian who is a recognized member of the hospital professional staff has every advantage and for the realization of the utmost benefit from the library, therapeutically as well as educationally, this is desirable. In the hospitals of smaller bed capacity, the public library will have to assume permanent responsibility, and for the best results should have a hospital librarian on the staff definitely assigned to this work. Local conditions will continue to influence the manner in which it may be instituted. No hard and fast rules can be followed.

The public library, in my opinion, should not hesitate to make it known that it stands ready to aid the hospital insofar as facilities permit as soon as assistance is desired. This step will not obligate the library financially beyond what it is able to assume and will show to the hospital its good intentions.

After taking this initial step, let the librarian unobtrusively go about making the hospital desire the assistance. There are numerous ways of doing this if one is watching the chance. Perhaps one of the best methods is to interest a physician who is friendly to the library and through his intercession have the matter of hospital service brought up at the local medical society meeting. To him, the work makes its appeal primarily as

therapy. Added to this, for the librarian, is that of extending library influence, and through this influence partaking in full share of the opportunities offered in the hospital field to reach patrons who would never share the benefits of the library otherwise.

With the way paved for this service, it remains to select the right type of hospital librarian to insure the future success of the work. We are all acquainted with the desired qualities and qualifications a librarian should have. The hospital librarian needs all of these in full measure—the usual technical requirements, a broad knowledge of general literature, pleasing personality, plus tact and patience to deal successfully with the sick, sympathetic understanding without sentimentality, and not least of all some knowledge of hospital procedure and a willingness to conform to its plan of administration. Given a hospital librarian in whom these qualities and qualifications are combined, I would almost venture to say that the work cannot fail.

Potential friends of the public library are temporarily gathered under one roof as tenants—a group composed often of many nationalities, with varying illnesses and differing degrees of intellectual ability. Distinctions are for the present laid aside. All belong to the leisured class with time to read now if they've never had it before. It is our part to make available to them the privilege of library service.

The sponsors of such a program have nothing to lose. The sick have much to gain. To them may be vouchsafed, through the healing and vitalizing power of healthy, normal mental activity, an extension of vision beyond the boundaries of their physical limitations into the land of books and reading, the avowed heritage of all.

Miss Dexter Honored

Miss Caroline M. Dexter, who for more than thirty years has been on the staff of the *Trained Nurse and Hospital Review,* was given a complimentary dinner on September 3. Miss Dexter was one of the first women in the publication field and directs a most successful advertising department.

THE GENERAL HOSPITAL IN THE CARE OF THE TUBERCULOUS

By BENJAMIN GOLDBERG, M.D., F.A.C.P., F.A.P.H.A.
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THE PAST 25 YEARS have evidenced a very marked increase in the number of beds provided through sanatoriums for the care of tuberculous in this country. According to Emerson, 25 years ago there were only 113 sanatoriums with 9000 beds for such patients. In the year 1930 this had increased so that there were 618 tuberculosis sanatoriums with accommodations for 73,695 patients, but even this remarkable increase is not sufficient to cope with the needs of some 1,000,000 individuals having active tuberculous disease in the United States. The large increase in the number of beds has occurred principally through provisions made by various municipal, county, and state governmental divisions for the care of individuals in their own communities, but the waiting lists for admission to these institutions continue very long and in many instances lack of early admission allows for progression of the disease from early to advanced stages. The correction of this difficulty can be made to occur immediately, without an increase in sanatorium building, if vacant beds in other institutions for the care of the sick can be brought into utilization. The advocation of the use of general hospitals for the care of the tuberculous is no new thing. As far back as 1912, we find the National Tuberculosis Association had appointed a committee to determine "the present status of hospitals for advanced cases of tuberculosis in this country and to formulate a standard for such institutions." This same association in 1916 recommended that general hospitals admit tuberculous patients and that such hospitals provide separate wards or rooms for the proper treatment of the tuberculous individuals admitted. The American Medical Association, in coöperation with the United States Public Health Service, in 1920 also advocated the admission of tuberculous patients into general hospitals throughout the United States and recommended that such patients, in cases of emergency or crisis, should not be denied necessary treatment.

Recognizing the need for a more liberal attitude with respect to the admission of the tuberculous into general hospitals, the American Hospital Association in 1921 adopted a resolution calling upon general hospitals throughout this country, wherever possible, to establish separate wards for the admission and care of the tuberculous. Canada, also recognizing this necessity, has, in the Provinces of Alberta, British Columbia, Manitoba, and Saskatchewan, passed legislation to the effect that all hospitals receiv-

ing aid from these Provincial Governments set aside 10 per cent of their beds for tuberculosis.

The reasons why the general hospital should care for the tuberculous patient are manifold and cogent:

The economic reason.—The sanatoriums are crowded and have waiting lists; the general hospitals have vacant beds and a consequently increased per capita cost. It seems unsound economics to permit beds which may be used to the great benefit of the community to remain empty.

It must, from another standpoint, be considered unsound hospital management to exclude the tuberculous patient, if he can be cared for in the hospital without detriment to others or any lowering of the hospital routine. Empty beds mean a loss; empty beds may be filled with pecuniary profit to the hospital, with economic profit to the community, and with health profit and, perhaps, life-saving to the individual patient.

The economic reason is variant in many other particulars. Laboratory and x-ray departments in a general hospital frequently run at half capacity or less. The personnel must be maintained and paid. It is obviously a waste to have high-salaried laboratory personnel idle during part of the working day. Accommodating tuberculous patients in the empty beds will also increase routine business in the various laboratory divisions. In the case of the general private hospital, and presuming that the tuberculous patients admitted can pay, as many of them can, this, of course, will mean definitely increased revenue for the individual hospital.

The small community as a reason.—The economic structure of a small community may allow for the building and maintenance of a general hospital. It may, on the other hand, afford and support a small sanatorium commensurate with its need. In many instances, however, it cannot, without inadvisable strain on its financial structure, adequately support both institutions at the same time. In such communities, therefore, it is absolutely justifiable that an amalgamation of sanatorium and hospital function take place, which should result in a well planned and well coördinated institution.

The humanitarian reason.—The humanitarian instinct, which unconsciously urges man to help his fellowmen, calls for a certain degree of amalgamation of sanatorium and hospital function—under certain conditions. Public sanatoriums throughout the country, we repeat, are thronged to capacity; in addition, many institutions have long waiting lists.

If we throw open the doors of the general hospital to the tuberculous individual, we are taking a progressive and humanitarian step. We are giving new hope to many hopeless, and inaugurating a health saving and life saving measure.

The public health reason.—The instinct of self-preservation is even stronger than the instinct toward humanitarianism. We instinctively place the wish to survive in the forefront of our consciousness.

Public health organizations are designed in their entirety to serve this instinct of self-preservation. If the people are conscious of a health menace, they wish to avoid it; if the public health organization, which represents the people, is conscious of a health menace, that organization, to fulfill its duty, must do everything in its power to minimize or eliminate the said menace. We know today that unsupervised tuberculosis in the community is dangerous; we know that every open case of tuberculosis is a potential community menace. We know, also, that the lower the social scale in which the consumptive lives, the greater is the menace to the community.

It follows, inevitably, from this reason that every case of open tuberculosis, taken from the community and supervised in a hospital or sanatorium, represents a definite diminution in the stream of community infection. If it were possible to give such hospital supervision to every open case of tuberculosis during the period of its disease activity, we would, inside of a decade or two, have no tuberculosis. The admission of tuberculous individuals to the general hospital constitutes a most effective public health measure, and is a definite step forward toward community health betterment.

The specialistic reason.—The tuberculous patient demands, and should receive, specialistic care. The type of care given to tuberculous individuals in the old boarding-house type of institution is today recognized as inadequate, and must be characterized in our times as neglect. The progressive sanatorium today aims to give specialistic care, and in attempting to reach the objective, is lifting itself to the plane of the general hospital. In many communities, however, and in many sanatoriums this phase of institutional evolution has not as yet been reached. For such communities and such sanatoriums the coöperation of the general hospital is of prime necessity. The specialistic care which cannot be furnished in the sanatorium can be given in the hospital, and such patients as need attention and service which cannot be rendered at the sanatorium may be transferred to the hospital for the necessary treatment. The tuberculous patient in the general hospital will have the advantage of service by a competent specialistic and consultant staff. He will find available the type of service which is economically impractical in any except large, progressive, and properly staffed governmental institutions in the neighborhood of big cities.

The research reason.—Research in tuberculosis has been lagging. Funds available in sanatoriums for research purposes, are, as a rule, inadequate.

In the general hospital tuberculosis research can be linked up with general research with mutual advantage, and with mutually better prospects. The tuberculous patient in the general hospital will furnish the necessary background and clinical material; the personnel is already there, and the equipment installed. The added expense involved in tuberculosis research, will, in comparison with the installation of a separate research department for tuberculosis, be insignificant.

The educational reason.—Professional education in tuberculosis is also lagging and inadequate. The curriculum in most medical schools, from the point of view of both didactic and practical work, is woefully insufficient. The reason for this appears to be obvious. The tuberculous patient has been assigned irrevocably and exclusively to the domain of the tuberculosis specialist. He is secluded in sanatoriums, is removed, and is forgotten. The amount of material available for school instruction is small and unsatisfying. A few patients are seen by the students in the outpatient department of the hospitals, or in the general school clinics. The students cannot, from these sources, gain even an approximate concept of tuberculosis. The situation would be far different if tuberculous patients were admitted to the general hospitals. In their ward walks the students would then have the opportunity to study cases in detail, to watch the various phases of tuberculosis, and to gain a coherent and sequential conception of that disease. The teacher of diseases of the chest would have ample material at his disposal, and would not be obliged to call upon the imagination of his students, a barren and ineffective procedure at best.

The nursing reason.—From the point of view of the nursing problem, the admission of tuberculous patients to general hospitals is advisable from two different angles: In the first place, admission of such patients would imply better general training for the student nurses. Today most nurses, graduated from the general hospitals, have very little knowledge of tuberculosis nursing. There are certain features in the psychology and personality of the tuberculous patient that can be learned only by experience. The knowledge gained in nursing the tuberculous is valuable, and should form an important part in the final equipment of the nurse who proposes to do general work.

In the second place, the tuberculous patient in the general hospital would receive, under ideal conditions, better nursing care at less expense. In most large sanatoriums, for economic reasons, the number of nurses per patient is inadequate. In the general hospital, with a rotation nursing program, and with the services of student nurses available, the patient should have the benefit, under proper conditions, of a thorough routine of nursing care.

The diagnostic reason.—From the point of view of diagnosis alone, the admission of tuberculous individuals to general hospitals is eminently advisable. It is undeniable that the early stage tuberculosis at times offers an almost insuperable diagnostic problem. At times only careful observation and study, supplemented by conscientious laboratory work, will determine an accurate diagnosis. It is obviously unfair that a patient should spend this period of time (necessary for diagnosis) in a tuberculosis hospital. The patient, once admitted to such an institution, feels that he is branded. He is a "sanatorium case"; his friends know it, and from time to time, perhaps unconsciously, remind him of it.

For these reasons, many patients in the "doubtful column" are unwilling to enter sanatoriums for "observation." Such patients, however, would, as a rule, make no difficulty about entering a general hospital. They would be quite willing to spend the time necessary to submit themselves for examinations and laboratory procedures. If they proved nontuberculous, they would leave the institution "without stigma," as one might say. If they were proved definitely tuberculous, they might later, depending on circumstances, be transferred to the tuberculosis division of the general hospital or to a sanatorium.

I think that most medical men would feel that an observation ward in a general hospital would be a distinct advantage to the patient, to the profession and to the community.

A final reason.—As a final reason, I may allege that the installation of a tuberculosis department in a general hospital will tend toward concentration of tuberculous individuals in one section. Today many hospitals accept tuberculous patients notwithstanding their avowal that they refuse to accept such cases. They accept them, in most instances, unconsciously. They come in under erroneous diagnoses and are allowed to remain in the wards, frequently over a prolonged period. Occasionally, as the diagnosis is made, it is difficult to have the patient immediately removed; usually, however, owing to the fact that the staff is not on the alert for the insidious forms of tuberculosis, the cases remain unrecognized. This condition would not hold if an energetic tuberculosis division were operative in the same hospital building. Such a division, as part of its function, would exercise supervision throughout the institution, weed out the tuberculous individuals from the general ward, and place them where they could have correct tuberculosis supervision.

IS THERE ANY REASON TO THE CONTRARY?

Is there any reason why the general hospital *should not* care for the tuberculous patient?

The writer feels that this can be answered with emphatic brevity. *There*

is no reason, granted proper conditions and proper management, why the tuberculous patient cannot be cared for in the hospital. Under improper conditions and poor management, *such a course is definitely inadvisable,* and even dangerous.

I do not believe that anyone will advocate the admission of open cases of tuberculosis to the promiscuous and rather crowded environment of the large general ward. Patients debilitated from other chronic conditions should not be subjected to the possibility of a tuberculous infection. This possibility must be absolutely and finally ruled out before we can even dare to consider the proposition. I claim, however, that suitable arrangements and conscientious supervision and management will eliminate even a remote possibility of house infection with its resultant tuberculous disease.

Special indications.—In a broad way, and from the long distance standpoint, any tuberculous individual might be properly treated in a modern general hospital. Certain types of cases, however, are more in need of general hospital care than others.

The following types of cases show special indications:

1. *The suspect case.*—This angle of the question has already been touched upon. The advisability of a brief period of hospital stay, tending to confirm or eliminate a diagnosis of tuberculosis, is apparent.

2. *The case for whom one or other of the various surgical procedures is indicated.*—In the future, perhaps, patients needing thoracoplasty and phrenectomy will be cared for in the general hospital. The expensive operating room equipment must be considered, even in the case of large institutions, as duplication. In the future, better coöperation between the hospital and sanatorium will tend largely toward eliminating expense. A patient in need of surgical treatment for tuberculosis may return to his home after a brief period of hospital residence. This procedure will release a bed in the sanatorium for a patient who may be badly in need of sanatorium routine.

3. *The patient who awaits admission to an institution and for whom segregation is indicated.*—This indication applies, particularly, to the open case in contact with children. The patient, in order to protect his children, should leave his home. Where is he to go? It is only fair that the community which compels him to give up his home and family life should provide him with a place to stay until such time as he may be admitted to the sanatorium.

4. *The patient for whom no sanatorium facilities are available.*—In some communities, even still, there are no sanatorium accommodations. In

such communities, it is only reasonable to advocate that a wing should be added to the general hospital for the care of the tuberculous. Such a step will constitute progress, rather than regression. The day of institutional isolation is past. Today the tendency is toward coöperation and coordination of all institutional facilities in the specific community.

The Houston Baptist Hospital Institutes Free Health Forums

Mr. Robert Jolly, superintendent of Baptist Hospital, Houston, Texas, has arranged a series of free health forums which is sponsored by the hospital. They are public meetings and are attended by more than two thousand interested citizens of Houston. There are definite programs, the speakers for which are selected from members of the medical profession of the city, and after each evening's program there is set apart a thirty-minute period for the purpose of answering questions submitted by persons in the audience.

Several other hospitals throughout the United States are making a definite contribution to the community welfare by conducting programs of this character. They are educational in purpose and bring the people and their hospitals in closer contact.

OUT-PATIENT SERVICE IN HEALTH RESORT COMMUNITIES

By Frank J. Walter
Superintendent, Saint Luke's Hospital, Denver, Colorado

There are several localities which, due to their natural advantages, such as atmospheric conditions, temperature, or mineral springs, are known as health resort communities. Thousands of health seekers, from all classes, every year migrate to them in search of relief from their sufferings—usually chronic—through the natural properties which these localities alone possess. Also, certain well known medical centers attract many individuals who are in search of better medical or surgical treatment than their small communities afford.

Those afflicted with tuberculosis, more than any other chronic disease, are attracted to these communities. There are many suffering from social diseases. Victims of carcinoma constitute a large number. A large group of individuals seek relief from mental and other chronic ailments. Many come to the higher altitudes to escape asthma and hay fever. This latter group is composed of a higher type of individual, who can afford to pay his own expenses, and does not, therefore, contribute to the problem of the out-patient department.

It is interesting to consider the types of people who seek such relief. Naturally, those from all walks of life and of all degrees of intelligence are attracted to these health resort communities. We need not consider the well-to-do patient who is able to care for himself financially, and to provide his own medical care. He offers no problem to the out-patient department. However, in the last ten years, due to the increased facilities for treating such patients in their home communities, this type has decreased 50 per cent.

There is the group that we have recently heard so much about—the middle class patient, who is honestly trying to get well. When he arrives in the community he has enough money to pay his own way for a reasonable time, but due to the cost of remaining an unexpectedly long period, his funds become exhausted; and he becomes an out-patient charge.

The type of person who creates the greatest problem to the community and to the out-patient department is commonly known as the "gasoline hobo." He sells everything he can in his place of permanent residence, in order that he may buy a second hand car, and arrives in the "Land of Promise" with his entire family. In most cases, if the car has any resale value at that time, he sells it in order to meet the immediate living re-

quirements. He usually lives in a cheap tourist or cottage camp, or becomes a "squatter" on any vacant property available.

The following descriptions give an insight into the living conditions of this class of people. One district where they frequently stop is between a river and the railroad tracks, entirely without sewer connections. A questionable water supply is obtained either from pumps or from springs near the river bank. There are no streets or electric lights. A great many of the houses are built of material salvaged from the city dump. Others obtain living quarters in the more congested tenement districts. Very often seemingly impossible situations are found, such as that of more than one family living in a single room.

A specific example is described as follows: A family came to a health resort community in an automobile. They camped on a city dump. The father had tuberculosis; the wife was pregnant; and there were five children in the family. A double health problem was presented to the community. There were no facilities for sanitation in the place where this family was living. They refused to coöperate with the health authorities in measures either to relieve the tuberculous patient or to prevent his infection from spreading to other members of the family and to the entire neighborhood.

It is impossible to maintain sanitary living conditions under such circumstances. The lack of sanitation in their living places makes these people a menace to the community; and the rule that the individual must be sacrificed for the general welfare of the group must be applied. In other words, the individuals suffering with the disease either must be cared for properly, or must be sent back to their own communities.

There is also the out and out pauper, or vagrant, who is unwelcome in any community. He reaches his destination by "bumming his way" on trains, or by "hitch-hiking." He must be taken care of, in order that he may not become a public nuisance. Usually, if he is not hospitalized, he is ordered to move on. Since he is what we term a "non-resident" in every community—lives nowhere—no one has permanent responsibility for him.

There is the honest unfortunate, who cannot make a success in life because he is suffering from tuberculosis, or some other chronic disease. He drifts from place to place, dependent upon charity.

Since the climate of the health resort is excellent at all times of the year, it is attractive for vacations. A problem is sometimes created by those individuals in very meager financial circumstances who come in good health, but are incapacitated while vacationing, and have to apply for outpatient treatment. An example of this type of case follows:

A family was vacationing in a resort community, having come from a

distant place. Their financial classification would be termed that of the lower middle class. By economizing and going somewhat in debt, they could provide themselves with an inexpensive vacation trip approximately once every three years. Their method of transportation was an old, unreliable automobile. In order to conserve their funds, they camped in cheap tourist and cottage camps; and their vacation was an existence from hand to mouth. While they were there the child of the family became ill, and their landlord recommended that they apply to one of the local clinics for medical aid. The case was diagnosed as scarlet fever, and, for the safety of the community, the patient was taken to the local contagious hospital. The family was unable to pay either the hospital or the doctor. During the period that the child was in the hospital, the family was forced to remain in the city. Their vacation budget and other available resources were rapidly exhausted, and, as there was no ready employment, the family became destitute, and had either to sell their car, the returns from which would tide them over for only a brief time at best, or apply to the city charities for maintenance until they could return to their home community. If they sold the car, they would be unable to return to their home when the child was again able to travel. Naturally, the city charities elected to take care of the family as well as the sick child until they could travel.

Let us consider how the patients are attracted to these health centers. The underlying factor which is responsible for their coming is the hope of being cured by the natural health-giving properties of that locality. There are, however, certain agencies responsible for their being attracted to the health resort communities. Commercial advertising, in which the community is described to the public in glowing terms, its healthful advantages too often over-emphasized and the necessity of medical care underestimated, plays a large part in attracting them.

People go to these communities because they have heard of them from relatives or friends who have lived there, or have known of other persons who were cured of similar afflictions by the climatic advantages. Indigent persons frequently migrate to these health resort communities because their home communities fail to take any responsibility for their welfare. In the past, some public officers and health departments have thought it easier to pay the transportation of families from their localities to health centers than to provide for them in their home communities, and have acted accordingly. They have even sent bed-ridden patients to these health resorts. This has not always been done with the motive of shifting the responsibility for the care of these people, but sometimes through ignorance on the part of those who believed that these sufferers needed only to

breathe the magic air and tread the enchanted soil of some of our famous health resorts to be completely cured.

A great many people are urged to go to these health resort communities by their physicians, who do not realize or stop to consider that the expense involved in moving a family to a new location, and providing for them until work can be obtained, is a strain upon the finances which many a patient cannot withstand; and after a brief, honest struggle the individual becomes a care of the charity agencies, including the out-patient department.

There is the chronic health seeker who goes from place to place seeking relief, but never subjecting himself to the medical discipline and privations required for his recovery.

There are those who are sent by the local chapters of national fraternal organizations to health resorts where sanatoria and hospitals are maintained for their members.

Since tuberculosis is the cause of most of this migration, we shall deal with the problems which are created by the victims of that disease. The migration of health seekers to certain centers has often played an important part in the growth of these communities. Many of those who have been cured have remained and later exerted a large influence in the business and professional life of their adopted cities. Others less fortunate in their recovery, and financially handicapped from the start, have been unable to carry on the struggle alone and have had to apply to the charity organizations of the health resort communities for assistance, not only for themselves but very often for the other members of their families. It is this type of individual who applies to the out-patient department; and it is with the problem which he and his family create that this discussion will deal.

A survey of two cities known as health resorts revealed that one person of every 54 of the resident population in one city, and one of every 75 of the resident population in the other city, were indigent tuberculosis sufferers. Of these, more than one-half were non-residents. One-half were foreign-born, and one-half were homeless men. The care of these unfortunate patients for one year cost the first city, whose population is 300,000, the sum of $200,000. Most of these patients were in moderate or advanced stages of tuberculosis before they reached the health resort, having come with the belief that this was their last hope of regaining a measure of health. In many cases the chances of recovery were slight, even with the best of care. The death statistics in one community showed that more than 40 per cent of the deaths occurring each year in that community from tuberculosis were new-comers, who had been in the state one year or less;

and of this 40 per cent more than one-half died during the first three months of their residence.

This emphasizes the fact that many of these patients are in a precarious condition when they leave their homes. The death rate among the indigent class is very much greater than among those of better financial circumstances. It would be possible, if time would permit, to tell many harrowing tales of the suffering, privation, and forlornness of these unfortunate people. They present a brave front at first; but many, after a bitter fight, are overwhelmed and forced to give up. The family is torn asunder, one or both parents dying and the children being placed in orphanages. They come with hope and confidence, only to find, in the reality, woe which is beyond common experience.

This situation creates the problem of compelling the citizens in these health resort communities to care for, either in their out-patient departments or hospitals, the citizens of other communities. The out-patient service forms but one part of the sociological problem created by the migratory indigent sick. In fact, it is so closely related to the charity, crime prevention, hospital, and public health interests of the community that it is impossible to deal with the out-patient problems without considering the others.

This burden applies not only to the medical care necessary, but involves the support of the patients' families. In cases of tuberculosis, it is at least a matter of months, and more often years, before patients recover to the point of supporting themselves and their families.

Due to their destitution and despair many of these individuals and members of their families are easily led into crime, thus creating a further problem for society.

The medical and surgical work in the majority of out-patient clinics is carried on by physicians of the community who donate their services. These doctors object seriously to caring for the indigent patients from other communities. They know that a great many of the patients whom they are called upon to treat in these clinics have at some time in the past paid adequately the medical men in their own vicinities, and feel that it is an injustice for these cases to be turned over to the physicians of the out-patient department only after their financial resources are exhausted. Moreover, from a scientific standpoint, these doctors are handicapped in the successful treatment of many of the cases which come to them, because of the fact that they come to the clinics when the prognosis is most discouraging, and the attending physicians must take up the almost hopeless task of treating those who are broken in body and spirit, as well as financially reduced. Sometimes the load on the few doctors who are

willing to devote their services to the clinics becomes so heavy that it causes very large personal sacrifices of time which should be devoted to their own private practices.

These patients have crowded the existing facilities which the communities have established for the treatment of their own citizens to such an extent that it is scarcely possible for any patients to be given institutional care except those in the most advanced stages. To the out-patient departments in these communities, therefore, falls the burden of attempting the treatment of those in the earlier stages of the disease. Due to the fact that the institutions caring for such cases are over-crowded, it is necessary that some patients be housed in other places, and a problem is thereby created for the social service department of the out-patient clinic—that of seeing that these people are living under sanitary conditions, and that those who can no longer continue outside of institutions are hospitalized as soon as possible.

Very often the hospital or sanatorium will have a patient under its care for years until the case becomes arrested. Tiring of hospital routine and discipline, and thinking that he is sufficiently improved to live outside the institution, the patient may leave the sanatorium against the physician's advice. Soon he finds that his judgment was at fault, and he again wishes to return to the sanatorium for care, but by this time his place has been filled, and until such time as the institution can again provide a bed for him the out-patient department must attempt to give him the necessary care, in order that the time, labor, and expense of the treatment given to him by the sanatorium may not be lost.

How is the problem to be handled? The indigent patients who are sent or voluntarily come from other localities should, in view of the fact that they can be treated successfully in their home communities, be returned to those localities just as soon as their presence is discovered. Those who are unable to travel must of course be cared for, either through the out-patient departments or through the hospital or sanatorium facilities. Due to this fact, the out-patient departments must coöperate with the local health authorities and report all patients treated in the clinics who are not residents of that community. Those who are the lawful charges of the community should be cared for accordingly. The health department should, also, by a similar method of coöperation with the immigration department, deal with the problem of the foreign-born, especially those of the laboring class, who migrate to these health resort communities.

The social service department of the out-patient section of all institutions should see that their patients, after discharge from either the hospitals or clinics, do not tarry in the community long enough to establish

their residence therein, and become citizens of it, thereby throwing the responsibility for their maintenance upon the adopted community. This procedure is absolutely necessary because the overwhelming majority of patients treated in this type of institution are indigent, and if they are allowed to become residents of the community, they will become county charges. The counties in such communities can protect themselves against such impositions by changing their statutes regarding qualifications for legal residence.

A young woman about twenty-two years of age, suffering from tuberculosis, came to a health resort from another community about six months ago. Her finances were very restricted, but she did have enough resources to obtain accommodations in a boarding house. She tried to get along without medical care, not even applying to any out-patient department. About a month ago she found her physical condition so serious and her financial resources so reduced, that she at last became alarmed and applied for assistance. By this time the disease had reached such an advanced stage that there was no hope of her recovery. Upon her urgent request, her sister came to her assistance. The sister was able to obtain a position, the income from which would meagerly support both of them but would not provide for medical care, which had to be given by the out-patient department of the city dispensary. Because the tuberculous patient was a resident of another community, the local health officials corresponded with the officials of her home community, who, realizing their responsibility in the matter, at once agreed to give the patient proper care as long as she lived, if the health resort authorities would send her back to them. The girl refused to return home. The sister plead that, since the patient had such a short time to live, she should be humored in being allowed to remain. The sister stated that she was willing to pay for the girl's maintenance and support, if the city would provide the necessary medical care. Her real objective was to keep the patient in the resort community long enough for her to establish a legal residence, at which time it would be the responsibility of the community fully to maintain and care for her; and the sister would then be free to return to her home, leaving the patient a community charge.

National fraternal organizations and veterans' bureaus maintaining hospitals or sanatoria in these health resort communities should be assured that every patient is provided with return transportation upon his discharge. In some cases this is now being done. It is the problem of the social service departments of these institutions to see that such arrangements are carried out and that the discharged patients do not remain and become charges of the community in which their hospital is located. Very often

the national organizations impose upon the community in regard to the care of some of their patients. For example: A local chapter of a certain organization located in a distant city sends an individual to one of their national sanatoria for care, but upon his arrival he finds that the institution cannot admit him at that time, as all available beds are occupied. The city is asked to care for this individual until such time as he can be given institutional care in the fraternal sanatorium. In many cases the city is compelled to care for these patients for months until vacant beds are available in the sanatorium.

Moreover, there is the problem of what to do with the patient who is no longer in need of sanatorium or hospital care but whose condition is such that he must still remain in the locality. He may be unable to work, or positions of a suitable nature may be hard to find. It is an economic waste for this patient to continue to occupy a bed, unnecessarily, just because he is unable to care for himself outside until his recovery is complete, especially when there are so many demands for every available bed. In an attempt to solve this problem convalescent homes are being established for such individuals. Unfortunately, in these health resort communities, there are at present not enough of such homes. For those who are able to gain admittance, shelter under proper sanitary conditions is provided until they are able to become self-supporting, during which time they may go to the out-patient department for medical care. This prevents their attempting to work before they are able, at the risk of forfeiting the benefits gained by months or years of care received in the sanatorium or hospital. These convalescent homes tend, of course, to become permanent boarding places, and are soon congested.

The state should maintain sanatoria for the citizens of that state. This would relieve somewhat the situation of the migratory patient, so far as the larger cities are concerned. The rural communities do not offer facilities for medical care such as are found in the larger cities, and therefore the citizens migrate to the larger centers for treatment, with the result that the burden of responsibility for the citizens of the entire state tends to fall on the more thickly populated areas.

One fair solution of the out-patient problem in the care of these patients would be the maintenance of out-patient departments by national organizations. Up to the present time these organizations have been taxed to the utmost for the sanatorium care of unfortunate members of their organizations, and have not been able to divert any portion of their funds from the work they are doing to the establishment of out-patient departments. This now falls upon the municipal tuberculosis dispensaries and the out-patient departments of hospitals.

Along this line, it might be interesting to trace briefly the history of many of these national fraternal and church sanatoria located in these health resort communities. They were in most cases originally founded by local groups to care for the citizens of that community. The demands for admission to them by these migratory indigents became so great that the local organizations found themselves financially unable to satisfy the requests for their services. They solved the problem by appealing to their organizations in other parts of the country, and soon their support, activities, and work became national in scope.

While the methods which are suggested will help to remedy the situation they will not completely solve the problem. The actual solution lies in a campaign of teaching the public, and in particular the agencies which are in any way responsible for this migration to the health resorts, that, with few exceptions, while climatic conditions play a recognized part in the care of certain diseases, immediate relief cannot be found without proper medical care, good food, plenty of fresh air, and, above all, peace of mind. And if an individual is not sure of obtaining all these in a health resort community, he is much better off at home. He should be convinced that his disease can be successfully treated in any community with intelligent medical care.[1]

[1] I gratefully acknowledge the assistance of Dr. B. B. Jaffa, manager of health and charities, city and county of Denver, in the preparation of this discussion.

OUR CONVENTION WEEK

THE AMERICAN HOSPITAL ASSOCIATION is holding its thirty-third annual convention in Toronto this week. The city of Toronto and its good citizens have extended the hospital people a cordial welcome. Their hospitality has been generous. They have left nothing undone to make our stay in their delightful city a pleasant one, and our convention a gratifying success.

Aside from their value as educational forums, conventions such as our own contribute a great deal in maintaining international amity. Conventions create friendships and promote international understanding. The hospital people of North America who are attending this convention will return to their homes with lasting memories of the beauties of Toronto and the unfailing courtesy of her hospitable people.

The American Hospital Association is deeply appreciative of the cooperation which His Honor, Mayor Stewart, and his official family have given us.

The Ontario Hospital Association, whose guests we are, and Dr. John Ferguson, its president, have been charming hosts.

The burden of the work of preparing for the convention has fallen on the capable shoulders of the General Arrangements Committee, of which Mr. Henry A. Rowland is chairman. His assistants, serving as chairmen of different committees, have carried this work and have made this convention the best in the history of the Association. To Mr. Rowland and his associate chairmen the American Hospital Association feels a deep sense of obligation for the work which they and their committees have done.

The chairmen of these committees are as follows:

Chairman, Committee on Local Arrangements—Mr. Henry A. Rowland, supt., Riverdale Isolation Hospital, Toronto.

Secretary—Dr. Fred Routley, 314 Medical Arts Bldg., Toronto.

Ladies' Committee—Miss G. B. Ross, supt., Wellesley Hospital.

Reception and Information Committee—Mrs. P. W. O'Brien.

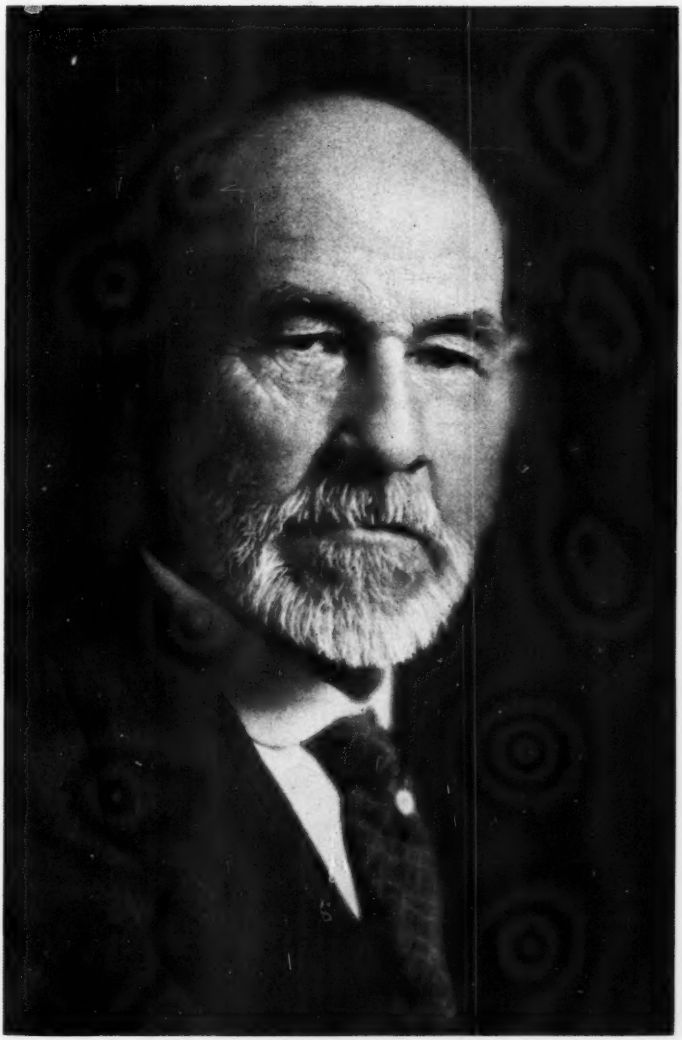
Entertainment Committee—C. J. Decker, supt., Toronto General Hospital.

Exhibits Committee—A. J. Swanson, supt., Toronto Western Hospital.

Banquet Committee—J. H. W. Bower, supt., Hospital for Sick Children.

Publicity and Decorations Committee—R. H. Cameron, Women's College Hospital.

Program Committee—Dr. G. Harvey Agnew, Canadian Public Health Association.



JOHN FERGUSON, M.D.
President of the Ontario Hospital Association, whose guests we are

Transportation Committee—R. R. Hewson, supt., Toronto East General Hospital.

The convention itself is worthwhile, as all such conventions are. It has assembled in Toronto people who administer and staff our hospitals and those who support them. Authorities on welfare activities closely associated with hospital work have addressed this convention and have participated in the discussions. There is no one who has attended the sessions of this convention but will carry back to his home more knowledge and better knowledge of his work, and of his hospital.

This convention more than any previous one is a fact-finding convention. It is confirming policies, establishing procedures, that have been well tested. It is keeping its feet on the ground, presenting subjects of major importance for discussion. This convention is tearing off the veil of superficiality and is baring the errors of our hospitals, without unduly exalting their virtues. It is getting down to cases and is "going somewhere and doing things" for all of our hospitals.

It is a friendly convention. It is combining its earnest work with some of the enjoyable features which the committee has provided. It is a serious convention, trying earnestly to work for the best interests of our hospitals, to bring them closer to the patient, to manage them more efficiently, and to hasten a return of a more prosperous day for all of our institutions.

GEORGE F. STEPHENS, M.D.
Superintendent of the Winnipeg General Hospital and Trustee of the American Hospital Association

REPORT OF COMMITTEE ON PUBLIC HEALTH RELATIONS

THE LITERATURE of the past decade has been rife with articles urging that hospitals join hands with other health agencies in their efforts to improve community well-being. The details, however, of this sensitive subject have been too pointedly avoided. Everyone admits coöperation between hospitals and public health organizations to be desirable, yet few propose the means of obtaining it. To define the limits of authority for the two groups, to outline relationships between them, are thankless tasks for any committee to undertake. Nevertheless, as the 1927 Committee on Public Health Relations of the American Hospital Association informed you, a surprisingly large amount of health work is already being done jointly by hospitals and public health agencies, and, having originated spontaneously, is in need of guidance, standards, purposeful direction. Hence, your committee feels justified in undertaking to make recommendations concerning the types of work that can be desirably carried on between hospitals and public health agencies and concerning general principles governing such coöperative work. The preceding committees have done some admirable investigative work giving a picture of the types of coöperation now existing for the control and care of contagious diseases, for laboratory service, and in clinic management. It is the intention of your present committee to use these previous studies, together with data from first-hand investigation of several outstanding hospital health centers, in submitting the recommendations contained in the following report.

The pressing need for coöperation between hospitals and such agencies as health departments, social service organizations, visiting nurse associations, Red Cross chapters, voluntary clinics, and others is more than ever apparent at the present time when so many of them find it necessary to conserve their funds. In times of economic stress the public is most sorely in need of health services. Yet how are these to be supplied adequately if health agencies are forced to cut their budgets? The solution seems to lie in coöperative activities. When each health agency cannot afford to give a complete service, then it must specialize and concentrate upon one or two. Thus one agency will furnish district nursing, another social service, another diagnostic service, another clinical treatment. And when these various agencies correlate their work, the result is almost certain to be a more complete and well-rounded health service, at lower cost, than if each worked independently.

The communities which have pioneered in coöperative public health work are deserving of great praise, for without the knowledge they have

furnished of the pitfalls to be avoided and the possibilities for success in special fields, we should have even more difficulty than at present in determining tentative standards for guidance in joint health services.

After studying the many kinds of coöperative relations in laboratory work, care of communicable diseases, social service, nursing service, and clinics, your committee has grouped them under the following headings as being acceptable from ethical and practicable standpoints. Those which do not fall under the divisions given are questionable or at least less desirable types of coöperation. It is far from being your committee's intention to criticize any communities not having these types of coöperation, for there are brilliant exceptions. The list is rather for the guidance of those who are seeking to promote coöperative health relations where none now exist, or to improve those already established.

ACCEPTABLE TYPES OF CO-OPERATION

Laboratory Service

1. The state or provincial health department furnishes laboratory service to hospitals, municipal health departments, or individual physicians not having adequate facilities for the same, or desiring to check their own analyses. As usually found, this type of coöperation applies particularly to examinations for rabies, syphilis, diphtheria, typhoid, tuberculosis, malaria, meningitis—in brief, for communicable diseases—and to chemical analysis of food and drugs. There seems to be no reason for limiting the type of analysis, however. On the contrary, it is desirable to extend clinical laboratory service to physicians and small hospitals for the diagnosis and treatment of non-communicable as well as communicable diseases. The New York state health department has set up its laboratory service essentially on this basis, an arrangement which is reported to be quite satisfactory. Under this plan laboratory service is brought to many small hospitals and physicians who otherwise would not have it available.

2. The state or provincial health department subsidizes the laboratory of one hospital, either municipal or voluntary, in each of several cities throughout the state or province. These laboratories are in the nature of branches for carrying on the same type of work as described in the above paragraph.

3. The municipal health department makes laboratory analyses for local hospitals, the county health department, local physicians, and voluntary health and welfare agencies, such as day nurseries, settlements, etc. This work is often done free of charge for hospitals and dispensaries, but usually a flat charge is made for each examination.

4. A municipal or a voluntary hospital provides laboratory service for the city or county department of health. The practice of having a private hospital take over the laboratory work for the community's health department, when the latter cannot afford to maintain such service of its own, is one of the more unusual aspects of coöperation. Yet the custom has developed spontaneously out of a real need, and there seems every reason for encouraging it, provided the hospital making the analyses is an accredited institution. The following are among the various financial arrangements:

(a) The health department furnishes part of the personnel, such as a pathologist or technicians, and the hospital supplies quarters, equipment, etc.
(b) The health department pays a fixed sum for each examination.
(c) The hospital supplies laboratory service upon payment of a stipulated monthly sum.
(d) The health department makes an annual grant to the hospital to cover the cost or partial cost of laboratory work.

Note: The policy of having a local health department contract with a hospital for laboratory service or having a hospital contract with a health department for laboratory service should be in the interest of efficiency and economy for the smaller hospitals and health departments. On the other hand, when units of service are sufficiently large to justify independent laboratories, service more suited to the needs of the particular institution can be developed.

Control of Communicable Diseases

You will recall that the Committee on Public Relations for 1927 based its findings on questionnaires sent by the Committee on Administrative Practice of the American Public Health Association to all cities of 30,000 or more in the United States and Canada, in order to determine the type of coöperation existing between hospitals and health departments. With reference to communicable diseases, their statistical analysis showed that of 247 cities replying, 58 had facilities for hospitalizing cases of communicable diseases in general hospitals. However, a study made in 1929 by the same committee (Sub-committee on Organized Care of the Sick of the Committee on Administrative Practive) to include the same group of 58 cities revealed that the degree of coöperation, or rather of hospitalization of acute contagious diseases, was not so great as the 1927 survey had seemed to indicate. The questionnaires for the 1929 study were sent to 192 cities where it was thought no communicable diseases were cared for in general hospitals, and to the 58 cities of the 1927 survey which were believed to be caring for communicable diseases in general hospitals.

Of the latter group, 51 replied and their replies were classified as follows:

Five had no facilities for hospitalizing communicable diseases.

Seventeen admitted communicable diseases only to special isolation hospitals.

Nine admitted communicable cases to general hospitals.

Eight admitted communicable cases to a separate building in a general hospital.

Twelve admitted only certain types of communicable diseases (such as tuberculosis or venereal disease) to general hospitals.

Of the group of 192 hospitals, 70 replied, and of this latter number only 9 stated that communicable cases were admitted to general hospitals.

Thus it seems apparent that among cities of 30,000 or more there is comparatively little utilization of general hospitals for the care of communicable diseases, particularly of the acute types such as scarlet fever and diphtheria. Yet, as is widely agreed, most cities under 100,000 find it exceedingly costly to maintain isolation hospitals, inasmuch as the latter require complete staffs and full equipment in order to be efficient even though they are often not in use during several months of the year. The committee making the study in 1929, referred to above, found, for instance, that in Greenwich, Connecticut, where a special isolation hospital was maintained, the net cost in 1928 to the city per patient per day was $13.36, and that in a number of other cities where first-hand investigation was made the cost of running a separate contagious hospital was unnecessarily high. One city reported that with the elimination of smallpox and the reduction of diphtheria in the community, its 40-bed isolation hospital remained fairly empty for six months of the year—a typical situation in many cities. Yet the usual staff must be employed and the building kept open for emergencies. Then, too, there is the expense of maintaining individual heating plants, kitchens, and other utilities.

Surely, if we are at all interested in reducing the costs of medical and hospital care, we must recognize that here is one of the most excellent opportunities for effecting economies, that is, by utilizing a portion of the staff, the equipment, and the building of a general hospital to care for communicable diseases. The advantages are far from being only financial. Patients receive the benefit of special facilities, already existing in the general hospital, for the prevention and treatment of contagious diseases and their sequelæ. Patients likewise have the advantage of a broader professional service. Too often the isolation hospital, maintained on meager public funds, has the barest minimum of equipment and medical and nursing service. The danger of rendering inadequate medical care in poorly equipped isolation hospitals is far greater than that of infection

which might occasionally result from adding a contagious ward or unit to a general hospital. Still another advantage is that hospitalizing contagious cases in general hospitals provides nurses and interns with the necessary clinical material to complete their education. Under the present system, in which contagious diseases are usually treated outside of a general hospital, it frequently happens that young physicians have not seen a sufficient number of cases of scarlet fever or diphtheria during internship to cope with them in private practice. Nurses, too, are often not qualified to care for these types of cases after their period of training in a general hospital that excludes communicable diseases.

Concerning the danger of infecting other hospital patients, that is generally agreed to be slight, as previous committees have emphasized, provided careful aseptic technique is maintained. It must be remembered, however, that constant watchfulness, implying a high type of administration, must be exerted and that scrupulous aseptic technique is expensive to maintain. Therefore, if the community is large enough to operate and make full use of an efficient isolation hospital in addition to a general hospital, that is the plan of choice, for even the possibility of one death due to infection spread to the general wards must give us pause. But in the event that a community can support but one well organized hospital, your committee not only concurs with previous committees in stating that a unit for contagious diseases should be an integral part of the hospital but also urges that such coöperation be definitely encouraged. Your committee feels that it is the duty of physicians, hospitals, and public health workers to aid in overcoming the prejudice among governmental bodies and the laity generally against housing contagious diseases in or near a general hospital.

In the interests of better care for persons having communicable diseases, of economy, and of better education for nurses and interns, coöperation between boards of health and hospitals in the management of communicable diseases could well be developed by many more rural communities and small cities than is now the case.

Your committee feels that the following types of coöperation in the care of communicable diseases are acceptable:

1. The city or county health department pays a per capita, daily or weekly rate for all cases (more often, only indigent cases) of communicable disease cared for by a designated municipal general hospital or a voluntary hospital (occasionally, to several hospitals in the city). As a slight variation of this plan, one hospital in the community is selected to care for the acute contagious diseases and another one is named for the care of patients with tuberculosis, venereal disease, etc.

The hospitals selected assume responsibility for proper clinical management of the cases. The health department, for its part, takes charge of the details of quarantine, directs home disinfection, and takes similar steps to protect the community. Although the patients are admitted on recommendation of private practitioners, the diagnosis should be confirmed by the health officer.

2. The city or county health department pays a flat sum annually to municipal, county, or private general hospitals for the care of patients (or indigent patients only) having communicable diseases.

3. The city or county health department pays to a designated public or private hospital a per capita sum for the amount of care furnished each patient with communicable disease, in addition to an annual sum to cover overhead costs of such care. Of the three plans here mentioned, this last is favored as being the fairest method of reimbursing the hospital.

4. The contagious disease unit of a local hospital is built by the city or county health department. The pavilion or ward may be maintained jointly by the health department and the hospital, or the health department may make an arrangement for per capita payment or an annual subsidy to cover the cost of the hospital's service. The second plan is preferable as it provides for greater centralization of authority and places the entire clinical management in the hands of the hospital with its existing facilities for treatment.

5. The pavilion for contagious diseases owned by a private hospital is leased to the city or county health department. The latter maintains the pavilion (or pays the cost of maintenance), directs the clinical work in relation to care of communicable diseases, and has the privilege of using the special facilities connected with the hospital. It is more desirable that the health department pay the cost of maintenance rather than take over the actual work of maintenance, so that a common dietary department, heating plant, and similar services may be used and thus greater economies be effected.

6. The state or provincial health department makes an annual grant to local general hospitals for the care of indigents with communicable diseases. In this connection may be mentioned the work of the New Jersey Commission to Study State and County Aid to General Hospitals, who reported in 1929 that the majority of hospitals in that state did not favor state aid to compensate for free service rendered but desired rather an extension of the existing systems of county and municipal aid. It should be noted that whether the subsidy is granted by the state, province, county, town, or city, the amount should be based

upon the actual number of patients given free service by the hospital. The size of the budget and the expenditure of funds should be decided upon by the health department and not only by a lay governmental body such as a city council.

7. The health department (city, town, county, province, or state) conducts and pays the costs of a drive for immunization against diphtheria, rabies, smallpox, etc., and the hospitals, either public or private, furnish the quarters and nursing service at a nominal charge to reputable physicians desiring to immunize their patients. In the case of patients unable to pay, immunization treatment is given by members of the health department or is paid for by the health department. In other instances, immunization is in charge of the health department, while the hospital simply furnishes accommodations and nursing and other services. The attitude of the private practitioners and the hospital is to coöperate to the fullest extent with the health authorities in disease prevention and public health measures.

8. The Federal government contributes part of the funds and personnel for projects of municipal, county, state, or provincial health departments for the control of communicable diseases. The work of the United States Public Health Service, too well known and established to need repeating here, is of this nature. Many of the activities embracing venereal disease control, examination for tuberculosis, and immunization are being centered around civil as well as Federal hospitals.

Social Service

1. The state or province appoints a social worker who does part-time social work for several hospitals in a given district. As it is usually found, this kind of coöperation is concerned principally with mental disorders. Massachusetts, for instance, supplies social service to state hospitals caring for mental cases, for the purpose of rehabilitating these patients and making them economically productive insofar as is possible. This seems a proper function for the state to assume and it would appear desirable that more states and provinces adopt the practice of furnishing social service to local hospitals, not necessarily state institutions, particularly, since many small hospitals are in need of but cannot afford social workers. As a step in this direction, state social service might well be supplied for orthopedic, tuberculous, and cancer patients.

2. A voluntary social service agency supplies a part-time social worker to a local hospital. There is a growing need for social service in hospitals, and for the institution having a limited budget this type of coöperation with a local welfare agency fills a real want.

3. The city health department supplies a social worker for clinics in a voluntary hospital. Even though curative medicine is not deemed a suitable field for health departments, there remain scores of other opportunities and one of the most fruitful of these is in social service. Municipal social workers who would search out the sick of a community and persuade them to take treatment, who would bring others to the hospitals for prophylactic care, who would follow up patients released from local hospitals not able to afford their own social workers, can be one of the greatest aids in eradicating disease in the smaller communities.

4. A local municipal or a voluntary hospital employs a social worker who, besides aiding the hospital, supplies data to the health department, welfare agencies, schools, etc.

Nursing Service

1. A local hospital furnishes the services of student nurses to voluntary or health department clinics. This arrangement is excellent as it gives pupil nurses experience in public health nursing.

2. The city health department furnishes follow-up nursing for prenatal, preschool, tuberculosis, and venereal disease clinics conducted by a voluntary hospital.

3. The city health department supplies nursing service for public health clinics conducted in a voluntary hospital. The idea of having health department nurses work in public health clinics held in hospitals seems particularly desirable.

4. The staff of a state or provincial hospital conducts clinics at the offices of local visiting nurse associations with the assistance of the nurses. As public health nursing is the agency through which the health department makes most of its contacts with the public, it seems less desirable for the health department to contract with a private organization such as a visiting nurse association for the performance of this service. The practice, however, prevails in certain places but is better if confined to localities where the health department is not able to support a program of public health nursing.

5. The visiting nurse association provides nursing service for out-patients in clinics conducted by certain voluntary or municipal hospitals.

6. The visiting nurse association supplies generalized home nursing service to out-patients of voluntary or municipal hospitals.

7. School nurse service is provided by a voluntary or municipal hospital, upon payment of a stipulated annual sum from the health department or board of education.

Clinics

Your committee feels not only that coöperation between hospitals and other public health agencies in the management of clinics is acceptable but that it is actually necessary for all clinics, particularly if they offer treatment as distinguished from diagnostic services, to be associated with a recognized hospital.

This arrangement is desirable from several standpoints. By coöperating with a good hospital the clinic obtains better facilities for treatment and has available a large medical staff for purpose of consultation. Thus a higher type of medical care is assured than is usually possible on the limited funds of a subscription-aided or tax-supported clinic. Another advantage: more persons needing medical care are brought to the hospital as the result of publicity campaigns conducted by the clinics. Overlapping of services on the part of the hospitals and clinics also tends to be eliminated. Finally, closer harmony between the medical profession of a community and public health workers is more likely to be effected when both groups are brought together upon the meeting ground of the hospital, facing as it does toward both curative and preventive medicine.

Because a so-called "public" clinic, whether it be one operated by the board of health or by a community chest, is to be associated with a hospital does not necessarily imply that the former is to lose its autonomy. On the contrary, the clinic may operate with its usual staff of administrators, with this difference: that the hospital makes inspections at regular intervals to ascertain if the clinic's facilities and plan of organization meet recognized standards. Should the clinic desire to keep its management intact, coöperation can be made effective by means of a liaison committee, composed of representatives from the hospital and the clinic.

Study of the field of coöperative health work shows the following kinds of clinics to be operated jointly, in varying degree:

Orthopedic	Hookworm
Tonsils and adenoids	Malaria
Eye, ear, nose, and throat	Trachoma
Tuberculosis	Health examination
Dental	Cancer
Vaccination	Venereal disease
Psychiatric	Prenatal
Habit	Well-baby
Child guidance	Preschool

Some of these clinics for which the resources of hospital and health department or voluntary agency are pooled are founded much more fre-

quently than others. The larger share of coöperation from the states and provinces, for instance, is extended toward clinics for the crippled, the syphilitic, the mentally abnormal, the tuberculous. There is, of course, no reason for confining state aid to these fields, but yet they are particularly appropriate as such clinics are designed to rehabilitate patients most likely to become state charges. One is struck by the sparsity of cancer and cardiac clinics. It would seem to your committee that more of these should be established in general hospitals, the latter to carry on the diagnostic work and the health department to conduct educational campaigns warning of the dangers of cancer and heart disorders. General diagnostic clinics, too, although they are increasing in number, are still fewer than they should be. A large portion of the public has been educated to demand periodic health examinations and yet is frustrated in securing them by the inadequacy of facilities for thorough diagnosis in the average practitioner's office. If the hospital's wealth of equipment for analysis of body secretions and body cavities could be made available to community physicians desiring *to keep their patients well* and not only to cure them after they have become ill, the gap between curative and preventive medicine, or, more concretely, between hospitals and public health workers, would be more easily spanned. The absence of coöperative clinics for prevention and treatment of goiter, obesity, and diabetes is noticeable also, but the need for these is probably not so urgent. It is gratifying to note the large amount of coöperation among clinics for prenatal care and child welfare. A tabulation would probably show that these two types of clinics outnumber all others under joint management. These, since they are concerned chiefly with preventive measures, are the most suitable for voluntary health agencies and public health departments to operate with a large measure of control. However, all cases requiring treatment should be referred to private practitioners. But, as the line of demarcation between preventive and curative medicine is nearly invisible, the importance of having independent clinics associated with a reputable hospital is easily apparent.

Coöperation of hospitals in the management of clinics owned by lay groups or "independents" is especially desirable in order that the latter may avoid the dangers of unethical practice and that medical standards may be kept high. If so-called lay clinics have erred in their methods of reaching the public, in the type of treatment rendered, it has generally been through ignorance or failure to understand the proper procedure rather than through wilful opposition to medical ethics. Closer liaison with high types of hospitals should help to correct this deficiency.

Coöperative relations in the conduct of clinics may vary all the

way from complete jurisdiction over the clinic on the part of the hospital, with the lay or governmental health agency promoting interest in disease prevention, to full autonomy of the health department or other health agency, with the hospital supplying only the clinic quarters.

The following, in the opinion of your committee, are acceptable types of coöperation in clinic management. The examples given in parentheses are listed not with the idea of limiting the kinds of clinics but merely to illustrate more clearly typical situations of coöperative management as found in various cities throughout the United States and Canada.

1. Part of funds, usually a flat sum annually, is contributed by the municipal health department for the operation of clinics conducted in the out-patient department of public or private hospitals. In this case, full control usually rests with the hospital, the advantage to the health department being that it need not go to the expense of maintaining its own clinics for disease prevention. (Child welfare clinics are conducted at a voluntary hospital, for which service the city health department pays $150 monthly.)

2. The entire funds for public health clinics in a voluntary or a municipal hospital are supplied by the health department. The administrative and clinical work is generally in charge of the hospital personnel. The advantage of having the clinical work directed by the hospital staff is that treatment measures, as well as diagnostic procedures, can properly be carried out. (A voluntary hospital conducts venereal disease clinics with funds supplied by the city health department.)

3. A voluntary or a municipal hospital supplies quarters for preventive clinics conducted by the city health department. In most instances, the hospital also extends the use of its laboratory facilities and equipment, while the health department's personnel conducts the clinics. (Well-baby clinics are operated by the local health department in a room of the out-patient department in a private hospital.)

4. A public or private hospital conducts clinics in quarters supplied by the local health department. This arrangement is not so desirable as the one above, since the health department quarters are likely to have fewer facilities than the hospital. The plan, however, adapts itself to branch clinics for prophylactic work for which it is desired to have the best medical skill available. (A community hospital conducts a tuberculosis and a preschool clinic in the offices of the department of health.)

5. A voluntary or a municipal hospital holds clinics, including periodic health examinations and diagnosis and treatment of disease, for school children on behalf of the board of health or the board of education; the municipality pays a stipulated annual sum for this service.

6. The municipal health department pays a local hospital a per capita sum for all tonsil and adenoid and orthopedic cases referred for operation.

7. A voluntary or a municipal hospital supplies quarters for a clinic conducted by the county. (A mental clinic is maintained by the county in the out-patient department of a city hospital.)

8. The province or state subsidizes clinics in local hospitals. (The provincial governments of Canada provide clinics for treatment and control of social diseases. These clinics are most frequently conducted in connection with various municipal or voluntary hospitals.)

9. The state or province provides the medical personnel for a clinic maintained at a local hospital. (The state furnishes the medical staff for a child guidance clinic in a voluntary hospital.)

10. The state or province conducts a clinic in quarters provided by a local hospital. (Two voluntary hospitals provide quarters for cancer clinics under the direction of the state department of health.)

11. The state or province furnishes the staff for a clinic held at a local hospital and the county pays the cost of maintaining the clinic.

12. The school dental department conducts dental clinics at a local hospital, the latter furnishing the quarters.

13. Preventive clinics are conducted in a local hospital by the visiting nurse association, to which organization the city health department contributes an annual sum.

14. A local hospital supplies quarters for a prophylactic clinic conducted by the Red Cross.

15. A local service club pays the cost of medical and nursing service for a clinic conducted in and by a local hospital. The hospital authorities, of course, select the personnel. (A business men's organization contributes to the maintenance of an orthopedic clinic.)

16. Various welfare societies conduct clinics in quarters provided by local hospitals. (The tuberculosis society holds diagnostic clinics in a municipal hospital.)

17. The community chest contributes funds for the maintenance of clinics in local hospitals.

18. A voluntary dispensary conducts clinics in quarters supplied by a public or a private hospital.

19. A local voluntary dispensary receives an annual contribution from the state or provincial health department toward the maintenance of a clinic, and a local hospital supplies the services of student nurses in exchange for training of the latter in public health and social service nursing. In this connection your committee wishes to point out that

while some communities in which health departments are coöperating with independent dispensaries are doing excellent work, better relations with the local medical profession will be maintained and the efficiency of the clinic increased if there is a tie-up with a recognized hospital. The hospital in turn will benefit by the added clinical experience for the instruction of its nurses and interns.

20. A municipal health department conducts a clinic in a voluntary dispensary and a local hospital aids in an advisory capacity (or supplies nursing service, extends laboratory facilities, etc.).

21. Welfare associations contribute various services to clinics conducted in and by hospitals. (A social hygiene league follows up all cases of opthalmia neonatorum on behalf of a local hospital.)

22. The Federal government through one or another of its departments or bureaus furnishes part of the funds and personnel provided the state, province, county, or municipality contributes toward the public clinics. The outstanding example of this type of coöperation is that supplied by the United States Public Health Service. The manner of coöperation has here been so thoroughly tested that it is no longer a problem but rather is a model for other groups planning joint health services. The projects embrace such varied types of health work as prenatal care, examination of preschool children, mental hygiene, and correction of physical defects. In these activities the local voluntary or municipal hospitals coöperate to the fullest extent.

GENERAL PRINCIPLES GOVERNING CO-OPERATIVE RELATIONS AMONG HOSPITALS AND OTHER HEALTH AGENCIES

Your committee seeks to lay down no arbitrary standards as to how joint health work shall be conducted, for in its details this is a problem for the individual community—a problem that must be worked out in large degree by the empiric method. But it does seem that if all the agencies concerned had a clear idea of the ethics involved, realized when they have precedence and when they must subordinate their authority, and understood the motivation for certain procedures and rules, much of the fog of administrative differences that so often hinders effective preventive medicine might be dissipated. With this in mind your committee submits the following principles, as a groundwork upon which future policies dealing with relations among hospitals and various public health agencies may be built. Your committee fully appreciates, of course, that time will no doubt reveal weaknesses in some of the following recommendations, that there will be need of repair and reconstruction in the future. Some of these principles you will recognize as being old timber, so to speak; others may strike

you as being too new to be well seasoned. Views on the subject of the public responsibility for public health are changing quite rapidly, and it is a point upon which there is much difference of opinion. The extent of this responsibility and how it will be discharged are matters which in the future will be determined, as they have in the past, by experience and the changing social order. Yet it must be remembered that in the matter of joint services hospitals and other health agencies are in need of guiding policies, even if they prove to be but temporary.

The following principles are submitted with the above factors in mind.

1. *It is desirable that every community take inventory of its own public health services so as to discover possible means of eliminating any overlapping functions that may exist and bolstering up any weak services through coördination and coöperation.* In many communities there are numerous voluntary organized groups, each sponsoring definite and ambitious health and welfare programs. It is most important for efficiency and harmony that these activities be properly correlated one with the other as well as with the local hospital or hospitals and the health department. A survey providing comprehensive data as to the scope and functions of each activity is essential for this purpose.

2. *No new public health agency should set up organization without first advising with the others in the field as to the community's needs and the manner in which existing agencies meet the requirements.* If public health work in the past had developed in orderly fashion rather than upon the impulse of philanthropy, which, however laudable, was usually limited to individualized groups, it is quite likely that more dramatic results would have been achieved by this time, at lower cost. Often a community has found itself in such a situation as having two philanthropic organizations supplying follow-up nurses and none furnishing a much needed social service. However, it is never too late to put our house in order, and by insisting that all new health agencies consult with those already giving service, we can do much toward leveling off overproduction and filling in underproduction in health services.

3. *All clinics engaging in curative medicine should be associated with recognized hospitals so that patients may have the advantages of modern diagnostic and therapeutic aids and the highest type of clinical care.* It is also desirable that clinics carrying on prophylactic work be associated in some manner with a reputable hospital, inasmuch as the gradations between preventive and curative medicine are often almost imperceptible and both types of care require the best of scientific skill. While it is recognized that many independent dispensaries and clinics are better equipped and staffed than a like number of small general hospitals, yet it is usually

admitted that the average general hospital, by the very nature of its function of caring for the sick, has better facilities for all types of medical treatment than has the average clinic supported by a voluntary agency or a health department. On the other hand, many of these clinics have been able to focus public attention upon the need for preventive medicine as few hospitals succeed in doing. Thus it would seem that hospitals and independent clinics should work in conjunction in order to complement each other.

4. *Every general hospital, whether urban or rural, should have a diagnostic clinic or health inventorium which reputable physicians might utilize for periodic health examinations of their patients.* If the community already has adequate diagnostic clinics, general hospitals obviously need not create additional ones but rather should seek to coöperate with existing clinics. Either of two plans may be adopted in extending the services of a diagnostic clinic: (a) the individual physician himself may conduct the examination and have the use of the hospital's laboratory services and equipment upon payment of a nominal fee, or (b) the examinations may be performed by members of the medical staff of the hospital and reports sent to the physician in charge of the case. In the latter event, the cost of the diagnostic tests is billed directly to the patient.

5. *It is not desirable that health departments enter the field of curative medicine, with certain exceptions.* The importance of keeping curative medicine in the hands of the private practitioner has been too much discussed to need repetition here. It would seem, however, that the health department is the logical agency to administer those parts of the medical program, other than custodial care, which may be accepted as a public responsibility.

6. *Wherever possible when health departments and voluntary health and welfare societies are engaged in coöperative activities, a recognized hospital should be included in the liaison, if only to serve in a consulting capacity.* The health program that unites only public health organizations and omits the hospital and its close contact with the sick of a community is weak. Moreover, by omission of the hospital, the majority of the medical profession are not represented in public health work. The hospital, in turn, having long been lax in the promotion of health, is in need of the richer experience in preventive medicine afforded by an exchange arrangement with health departments, voluntary dispensaries, heart associations, welfare societies, well-baby centers, and similar organizations.

7. *In the event that health departments, whether state, provincial, county, or city, wish to establish or subsidize local clinics, it is preferable that such clinics be placed in approved hospitals rather than in quarters*

provided by voluntary dispensaries or charitable organizations. It is but logical that the hospital, with its x-ray equipment, clinical laboratory, physical therapy department, dietary department, social service, and numerous other facilities for aiding the ambulant patient as well as the acutely ill, should be the site of proposed new clinics supported by government aid. Other voluntary agencies, often operating on limited funds, are likely to have to install a large amount of new equipment in preparation for such clinics. It is universally recognized, however, that many of the special services which these societies render are indispensable to preventive medicine. For instance, coöperation between a state health department and a social hygiene league in the prevention of venereal disease is much to be desired. The state may find such a society of invaluable service in reporting and following up cases of lues. But still, the ideal would be to have both these groups sending out their services from a local hospital. Thus, if the state desired to subsidize a venereal disease clinic, the latter should if possible be established in a general hospital where the social hygiene league may also have offices and contribute in various ways, such as supplying social service and follow-up nurses and furnishing medicinals.

8. *Every provincial or state health department should have a public health laboratory.* Those who practice medicine in large urban centers are apt to take for granted that every hospital has a high grade clinical laboratory, but a survey would probably show that vast sections of the United States and Canada do not have adequate laboratory facilities. Many small hospitals find a laboratory to be a drain on their resources, yet they cannot give proper clinical care without such aid to diagnosis. Every hospital worthy of the name should, of course, have a laboratory for performing routine tests, but there are many times when the small hospital needs the assistance of expert pathologists to confirm examinations or to perform analyses for the more uncommon communicable diseases. A well set-up state or provincial laboratory would fill a real need in such cases and would also be of untold value to physicians working in isolated localities. Health departments in sparsely settled counties and in municipalities where the taxpayers cannot afford to maintain any but the most rudimentary health services likewise have need of a state or provincial laboratory to test water supplies and make examinations in cases of communicable disease.

9. *Where hospitals are authorized to perform examinations for the detection and control of communicable diseases, it is desirable that such laboratories be approved by the state or local health departments.* However, as it is not always possible to free the latter from politics, the ap-

proval of such disinterested bodies as the American Medical Association and the American College of Surgeons, which now inspect hospital laboratories, is probably more to be desired.

10. *Hospital laboratories utilized by municipal or county health departments should preferably be designated as official branches of the state or provincial laboratory.* In this way government health services can be better coördinated.

11. *When hospitals receive government aid, the departments of health concerned should be consulted as to the desired amounts and as to the allocation of the various sums.* In addition, payments should be made through the department of health rather than through city councils or bodies of similar political character. The health officer, being a physician, should be better able than lay governmental groups to judge the health needs of a community.

12. *Where coöperative health work involving the care of patients exists there should be mutual availability of records.* A number of cities have already worked out practical systems whereby the patient's clinical and social record follows him promptly whenever he is referred or transferred to the several agencies coöperating in his care. For example, the Buffalo City Hospital health center has a coördinated record system covering its main clinic and numerous branches. Of similar nature is the confidential social service exchange found in a number of cities.

13. *All persons who can possibly pay for health services, even if it be only a fractional amount, should be encouraged to do so, in order that the public may not be pauperized and that they be made to realize the need for setting aside a certain sum for anticipated medical and hospital care.* A large portion of the populace has come to feel that costs of illness can easily be evaded, with the result that the deficit incurred by hospitals and physicians in rendering a large amount of free service has had to be borne by another large group, the middle class, who can ill afford to pay high charges. Philanthropic societies, in their zeal to eradicate sickness and to aid the poor, have often in the past been rather too liberal in dispensing charity, thus making it difficult to obtain payment for health services even from many able to pay. Hospitals, too, have often been lax in making proper investigations of patients' resources. If hospitals and health agencies in a given community can reach an agreement as to which types of patients shall receive free or part-pay services and will conduct a credit bureau on an exchange basis, much will be done to eliminate unnecessary charity and to imbue patients with the idea that costs of sickness must be paid for just as much as any other commodity.

14. *Payment for treatment of indigent patients either outside or in-*

side the hospital or clinic is, at least ideally, the function of the community through the health department. More health departments should assume this duty than are now doing so. It is not fair to saddle hospitals and particularly private practitioners with the large amount of free services which they are now expected to render. Nor is this plan just to the large portion of the public who, though not destitute, have small incomes and are asked to pay the full rate of hospital and medical charges, a figure that generally includes at least a part of the losses incurred by charity service. Taxation to cover the cost of treating the indigent sick would spread the burden far more equitably. The public is already educated to the view that the treatment of needy persons having contagious diseases should be paid for by taxation and the funds distributed by the local health department. Hence it should be but a short step to acceptance of the idea that all types of indigent sick be cared for from public funds. Obviously, it is a matter of informing the public, a task to which health officials, physicians, and hospital authorities must lend their energies. Coöperation already existing between hospitals and health departments will also go a long way toward furthering this plan, for it has been demonstrated that curative medicine can be retained in the hands of family physicians even though payments come through government sources. As the plan has been worked out in numerous communities, the health department pays an agreed sum to cover the cost of care for each indigent patient (at present, usually those with communicable diseases) and the hospital or the family physician undertakes the actual treatment. Thus there is little danger of state medicine entering in, and the personal relationship between physician and patient is maintained, the while the cost of care is distributed more evenly.

15. *General hospitals may properly care for communicable diseases and should be encouraged to do so if the community cannot afford to support both an isolation hospital and a general hospital.* However, as strict aseptic technique must be maintained when communicable diseases are housed in a general hospital and as there is some danger, though slight, of spread of infection to other patients, contagious disease hospitals should be provided in cities able to maintain several institutions for the care of the sick.

16. *Rural health centers should be increased in numbers and in quality, and greater emphasis should be placed on preventive medicine among rural populations.* As an instance of the inadequate distribution of health services, Dr. Allen H. Bunce points out that in the state of Georgia more than 70 per cent of the counties have no hospital facilities and that the available facilities are concentrated in the cities. Yet during 1929 only 57 per cent

of the available 12,500 beds were occupied. This situation of too many hospitals in the cities and small towns and too few good hospitals in rural areas is probably typical throughout the United States and Canada. Careful planning of health programs in relation to existing agencies, in other words, coöperation among health agencies, will tend to eliminate such faulty distribution.

It has become almost axiomatic that the sick of large cities have every possible medical aid available to them. What is more, a large proportion of city dwellers have become educated to the point of availing themselves of the wonders that scientific medicine has to offer. Inhabitants of rural districts, once held up as models of health, are found from actual survey to be sadly in need of even simple types of medical care. They suffer from deficiency diseases because they have not been instructed in the importance diet plays in health, they neglect diseases which could in many cases be cured by proper surgical care, they are not aware of the importance of strict sanitation, they do not receive adequate dental care, they are among the strongest believers in the efficacy of patent medicines —all this and more because the clinic doctor, the social worker, the visiting nurse, have not been on hand to instruct them in health conservation. When country people do fall acutely ill they are generally rushed to a small town hospital where operation is probably performed. Then after recovery they are sent back to their homes, without having been exposed to the germ of an idea as to better health habits. A health center located in a small municipality and having, besides facilities for bed patients, a diagnostic clinic, a prenatal clinic, a diet clinic, social service, generalized home nursing—in short, a center whence activities of all government or voluntary health agencies might be broadcast—would, without doubt, prove to be one of the most potent factors in reducing the morbidity and mortality in rural areas. By locating such health stations in centers of population, easily reached by rail and highway, the attendance would be considerably higher than in the average small town hospital and as a consequence better equipment could be provided and a high type of clinical talent would be attracted. Coöperation on the part of the community hospital, the local health department, the county health department, possibly the state board of health, the local charitable organizations would be the means *par excellence* of establishing rural health centers.

As Dr. Bunce has also pointed out, we have consolidated school districts, so therefore why not consolidated hospital districts for communities not able individually to maintain good hospitals? Thus there could be coöperation between community and community and in this way a more efficient and better distributed hospital service assured. Several districts might

unite to build a rural community hospital; the visiting nurse association of one district might furnish home nursing service; the tuberculosis society of another locality might take charge of a preventive clinic; a voluntary agency in still another section might supply the hospital with social service; and so on.

17. *More hospitals should be developed as health centers.* It is rather amazing to note how few of the well known health centers are housed in hospitals, and, for that matter, how few of them have been originated and developed by hospital workers. Most of these outstanding health projects have been created by health departments of large cities working in conjunction with well endowed philanthropic foundations. With large sums at their command, these groups have developed huge health centers from scratch, so to speak. But what of the smaller city, the one which does not have million dollar charities? How shall it extend good health to its people? The answer lies in its hospitals. The task of establishing a health center is half accomplished if one starts with a good hospital as a nucleus. The facilities for examination of school children, immunization, prenatal care, diagnosis and treatment of venereal disease, dietary instruction, rehabilitation of the physically and mentally handicapped—all these and others are already there. It is merely a question, in many cases, of adding extra rooms, minor equipment, and a slightly larger personnel to care for the expected increase in ambulant patients. Nor is only the general hospital adapted to the establishment of a health center. The maternity hospital has a splendid opportunity to conduct prenatal clinics, well baby clinics, preschool examinations, child guidance work, classes in health habits, immunization, and the like. The hospital for mental diseases, as another example, is ideally suited for classes in occupational therapy, training of the subnormal child, habit clinics, psychiatric social work, observation of delinquents, and prevention and care of various types of mental disorders in adults. That which the hospital lacks to become a well rounded health center can usually be supplied by other health organizations in the community. Illustrative of the hospital health center embracing many organizations is that connected with Dalhousie University at Halifax, Nova Scotia. Here a public clinic is situated close to Victoria General Hospital, the Civic Tuberculosis Hospital, the Children's Hospital, and Grace Maternity Hospital. Clinic patients needing ward care can easily be transferred to any of these hospitals covering a wide range of health needs. Treatment clinics are in charge of the medical faculty of Dalhousie University, while the clinics for preventive care, such as child welfare, preschool examination, and dental care, are conducted by the Massachusetts-Halifax health commission. Dental clinics for children in the vicinity are also held by the Halifax

school board. Social service is supplied by the Halifax welfare bureau which has offices in the clinic building. Another agency contributing is the provincial department of health which has a venereal disease clinic at the Dalhousie health center. Nursing, too, is conducted on the coöperative plan, as clinic nursing and home nursing are furnished by the Victorian Order of Nurses and the school nurses. As now organized, the Dalhousie center is the hub from which most of the city's health services radiate. Most cities of moderate size have the possibilities for establishing just such an all-inclusive health service. All that is needed is the will to cooperate.

Still another famous health center is that of Alameda County, California. It serves an area of 172 square miles and provides for preventive, curative, and custodial care. Especially interesting is the fact that the policies are directed by an executive committee chosen by representatives of local health organizations, both public and private. The headquarters of the Alameda County project is in Oakland where a modern hospital furnishes both diagnosis and treatment services. Housed also at the headquarters are the central offices of the visiting nurse association, the school health workers, and the local tuberculosis association. Branch health centers, including a preventorium for children, are established throughout the country.

18. *Every community of size (for example, 30,000 or more population) needs a health council composed of representatives from the various recognized health agencies and the medical profession, for the purpose of directing correlation between hospitals and other health agencies.* Rural communities likewise need such a board of control, the jurisdiction in this case possibly covering the county or the township. The members of such a liaison committee might, as an instance, be comprised of the local health officer, a representative of the local hospitals (probably a superintendent), a member of the medical profession at large, a representative of the social service agencies, a member of the Red Cross chapter, the director of the local tuberculosis society, and a representative of the voluntary dispensaries. The board would serve without salary and would probably meet twice annually and as emergencies demanded. The duties would be solely of an advisory nature, relating to the allocation of health work so as to eliminate overlapping of programs and duplication of services. At first sight, this might seem to be a difficult task, but surely no more difficult than allocating the funds to the various agencies participating in a community chest. This type of health council might also serve as a public relations committee; that is, after it had developed a health plan for the community, the committee could make the public acquainted with

the numerous services that are available. The Committee on Public Health Relations of the New York Academy of Medicine, though its membership is confined to the medical profession, performs functions of this nature and demonstrates the tangible results that can be accomplished by a health council. This committee not only publicizes the activities of the medical profession; it interests itself in every phase of public health from the smoke abatement problem to standards for maternity care; it has fostered much needed health legislation and has maintained a close relationship with the municipal department of health and related bureaus; in short, it is responsible in large degree for scores of improvements relating to public welfare. These, too, should be the functions of the community health council.

Illustrative of what can be accomplished by a liaison committee is that appointed in 1928 by the Tennessee Medical Association to extend cooperation between the medical profession and the state health department. While this sort of committee does not have as broad a scope as the health council representing all of a community's health agencies, both spring from the same seed. For instance, any health project contemplated by the Tennessee department of health is first presented to the liaison committee for approval. Thus no active steps are taken without previous consultation among the agencies involved. The moot question of coöperation in clinic service seems in this state to have been solved satisfactorily to both groups concerned. The general policy has been for the state to handle educational campaigns and to conduct preventive clinics but to refer to physicians all patients needing treatment. Indigent patients are treated by the Tennessee state health department if the physician so desires, but free patients are accepted only when referred by a physician. Yet even when the cost of a case is borne by the state, the patient's family physician is encouraged to keep in close contact; indeed, the family physician even takes charge of the treatment of indigent crippled children, the cost of whose care must be borne by the state. In brief, many of the problems of rôles and responsibilities which have proved stumbling blocks to coöperation in some localities seem to have been smoothed out very successfully by this liaison committee.

In order to be influential in bettering public health, the community health council must first outline a plan governing all local health work, a plan that must be as well organized as any chart of hospital administration, as any clinic's plan of management. Without such plan, public health work in the community will be at cross purposes. The members of such a health council must, of course, be of the highest caliber—persons who will not seek to obtain the largest share of authority for the organizations which

they individually represent but will rather place the good of the patient above all else. But these persons should not be hard to find, for we are coming to realize that competition among health agencies for power and glory is disastrous to all. If we must have rivalry, let it be competition between city and city as to which can show the lowest mortalities and morbidities.

Respectfully submitted,

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REFERENCES

Bunce, Allen H.: Doctors, Nurses, and the Community. J. A. M. Georgia **28**: 559-561. (Dec.) 1929.

Carpenter, Howard C.: Responsibility of the Hospital in the Prevention of Disease. Mod. Hosp. **25**:497-499. (Dec.) 1925.

Cole, Wyman C. C.: Preventive Medicine in Private Practice. Am. J. Pub. Health **21**:255-261. (Mar.) 1931.

Curtis, Hannah: Economies Effected through State Hospital Social Work, Mod. Hosp. **23**:317-320. (Oct.) 1924.

Davis, Michael M.: Clinics, Hospitals, and Health Centers. Harper & Brothers, New York, 1927.

Klotz, Walter C.: Features that Distinguish Group Clinics from the Outpatient Service of Hospitals. Mod. Hosp. **29**:160-162, 186. (Oct.) 1927.

Livingston, William H.: Social Service for Cancer Patients. Mod. Hosp. **23**:553-554. (Dec.) 1924.

Lumsden, L. I.: Coöperative Rural Health Work of the Public Health Service in the Fiscal Year 1930. Pub. Health Rep. **45**:2613-2633. (Oct. 24) 1930.

MacEachern, Malcolm T.: The Hospital as an Organized Health Center. Bull. Am. Coll. Surg. **14**:20-29. (June) 1930.

Mountin, Joseph W.: Uniting Physicians and Health Agencies for Specific Objectives. South. M. J. **23**:361-364. (Apr.) 1930.

Plumley, Margaret Lovell: A Health Center in a Hospital—a Community Experiment. Mod. Hosp. **30**:144-150, (May) 1928.

Rappleye, Willard C.: Getting a Picture of Community Health Needs. Mod. Hosp. **29**:55-58. (Aug.) 1927.

Relations between Health Departments and Hospitals. Am. J. Pub. Health. **18**:290-299. (Mar.) 1928.

Report of the Committee on Public Health Relations, New York Academy of Medicine. Charles C. Morchand Co., New York, 1930.

Report of the Commission to Study State and County Aid to General Hospitals, State of New Jersey. (Jan.) 1929.

Report of the Inter-Relations Committee of the Ontario Medical Association for the Year 1930-1931.

Richardson, D. L.: Enriching Hospital Service. Mod. Hosp. **24**:446-450. (May) 1925.

Rowell, Hugh Grant: Hospitals and School Health Departments. Mod. Hosp. **22**:70-72. (Jan.) 1924.

Ruhland, G. C.: Public Health and Private Practice. Am. J. Pub. Health. **21**:267-271. (Mar.) 1931.

Taylor, Ruth: Coöperation of Official and Private Health Agencies. Hosp. Soc. Serv. **21**:136-141. (Jan.) 1930.

The Care of Communicable Disease in General Hospitals. Report of the Sub-Committee on Organized Care of the Sick. Committee on Administrative Practice, American Public Health Association. New York, 1929.

Wallace, James: Care of Communicable Diseases in General Hospitals. Am. J. Pub. Health. **22**:722-726. (July) 1930.

Waller, C. E.: The Relationship between the Physician and the Health Department. Colo. Med. **28**:103-107. (Mar.) 1931.

Whitelaw, T. H.: Coöperation of Health Departments and Hospitals. Public Health J. **19**:416-420. (Sept.) 1928.

Winslow, C. E. A.: Importance of the Out-patient Department, from the Point of View of Public Health. Tr. Am. Hosp. Assn. **28**:294-303, 1926.

EXTENT OF AIR CONDITIONING REQUIREMENT FROM THE STANDPOINT OF HOSPITAL ADMINISTRATION

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The extent of air conditioning requirement in a hospital can be considered from two angles; first, its therapeutic value, and, second, its economic considerations. The time allotted to this paper does not permit a complete study from both angles and therefore attention is directed more to the second, because, as it can be shown that air conditioning can be applied to every room in a hospital within our present economic limits, its adoption by our medical associates will then be based solely on its merits in maintaining and restoring health to hospital occupants.

The main factors governing the possible development of air conditioning in hospitals can be summarized as follows:

1. The therapeutic value of air conditioning has already been established by the results obtained in the few installations in parts of hospitals in different localities on this continent, but to a much greater extent evidence of its value can be found among the employees in industrial and commercial buildings into which air conditioning has been introduced.

2. The adoption of air conditioning up to the present has been hindered by the fact that its first cost has been greater than ordinary heating plus an allowance for a moderate amount of ventilation.

3. These comparative costs only apply to buildings constructed in such a way that their capacity for holding heat either in or out is very limited.

4. Buildings with walls and roofs of high heat capacity and low heat conductivity are in use now in Canada that prove the recommendations of the American Society of Heating and Ventilating Engineers regarding the calculations to be made for the size of heating plants for such buildings to be practically 100 per cent in excess of actual requirements, even after due allowance has been made in their formulae for the reduced conductivity of such walls and roofs.

5. Without adding anything whatever to the building cost in such a hospital, under the climatic conditions of practically the whole of Canada and large areas of the United States, the first cost of the heating plant can

be reduced by approximately 60 per cent as compared with that in a building of ordinary construction.

6. This reduction in heating plant requirements brings the possible cost of air conditioning throughout such a building down to about the level of ordinary heating apparatus such as we now use in hospitals constructed as they have been during the past twenty-five years or so.

7. The annual cost of such air conditioning in a building with high heat capacity walls and roof, to give comfort and relief in summer to the same extent as in winter, would be considerably less than the cost of inefficient heating in ordinary construction, with its entire lack of relief to patients in the heat spells we suffer from each summer.

8. Adoption of construction methods that will permit such high reductions in heating plant capacity, and therefore stimulate the use of air conditioning units, will have the further advantage of giving us quieter hospitals, having regard to noise entering the building from outside and also noise developed within.

9. Another advantage that follows the building up of resistance to heat flow in walls and roofs is the raising of the temperature of the inside surfaces of all exposed wall and roof areas in winter and lowering the same surface temperatures in summer. This decreases the radiation of heat from the body to adjacent cold surfaces in winter, and increases it in summer, while at the same time permitting the lowering of the air temperature in the rooms both winter and summer.

10. Walls and roofs of high heat capacity and low heat conductivity are, of necessity, considerably lighter than ordinary walls and roofs. Therefore huge reductions in the dead loads carried by structural members are effected. This offsets any increase in cost due to the increase in heat resistance embodied in walls and roofs.

THERAPEUTIC VALUE

There are many articles dealing with this phase of the subject, but, in leaving this part of the discussion to the medical authorities, I would call attention to opinions expressed by F. M. R. Bulmer, M.B., B.Sc., (Med.) Department of Health, Ontario, in the Canadian *Medical Health Journal*, October, 1929, in which he calls attention to the need for "producing an atmosphere with proper deheating effect in relation to heat production of the occupants, creating a variable air motion which gives the necessary cutaneous stimulation . . . ." "Ventilation should introduce air without directional air velocity and with considerable variability. Stimulation depends on variety."

The authors of "Application of Air Conditioning to Premature Nurseries in Hospitals," by C. P. Yaglou, Philip Drinker, and K. D. Blackfan, (*Heating, Piping, and Air Conditioning,* July, 1930) conclude as follows: "In short, premature infants generally exhibit marked inability to maintain a normal body temperature by their own efforts and they show little resistance to infections, especially respiratory infections. The mortality rate exceeds 50 per cent and has two peaks, one occurring in cold weather and the other in excessively warm and humid weather. . . . A four year study of the influence of air conditions on the growth and development of premature infants at the Infants' Hospital, Boston, showed that a mechanical air conditioning system of the central station type could be applied with marked success to the group care of these infants. . . . The application of air conditioning to the premature nurseries of the Infants' Hospital was followed by a marked reduction in the incidence of diarrhea and in the mortality rate. Infections were reduced to a minimum, and gains in body weight increased. These benefits are attributed to advances in medical treatment and improvement in nursing and general care as well as to the installation of the air conditioning system described."

Other references to studies of the effect of air conditioning in combating disease are found on pages 711-712, August number of *Heating, Piping, and Air Conditioning,* and the position of this combined art and science is summed up generally by Charles Bryne in the February number of the same journal in his article "Air Conditioning for Diseases" as follows:

"It is not unreasonable, therefore, to see in air conditioning a solution to many hospital problems. The skin can be put in more healthy condition by radiant heat, the metabolism can be greatly improved, the many discomforts and difficulties incident to different diseases can be eliminated, fever can be effectively reduced, and moisture effusions can be rapidly removed. Not only should air conditioning give a larger percentage of cures, but the usual time to effect a cure should be reduced with the use of such equipment."

CUTTING THE COST OF AIR CONDITIONING

If it be granted that greater use of air conditioning in hospitals is desirable, the problem that confronts us is how to get its benefits without adding to the first cost of building construction and without adding to the rapidly mounting peak of administrative charges.

To understand the factors outlined in items 2, 3, 4, and 5 at the beginning of this paper, it is necessary that we study briefly the theory on which heating engineers base their calculations to determine the size of heating plant necessary to provide comfortable winter conditions in buildings.

From scientifically established data the amount of heat required to heat the air that enters the building per hour is determined. Similarly, the amount of heat transmitted per hour through windows and doors can be calculated. Equally scientific data are available to give the amount of heat transmitted through each square foot of exposed wall and roof. All of these computations are based on a difference of one degree Fahrenheit between the outside and inside air temperatures.

Up to this stage there is general agreement as to the correctness of the data, but in applying the data to actual building problems there is opportunity for the widest possible variation of assumptions.

Experience with buildings having very limited resistance to heat flow in their wall, roof, and window construction has proved that the results in heating plant sizes are very dependable when the outside temperature assumed is no higher than 15 degrees Fahrenheit above the lowest recorded temperature as reported by the weather bureau during the preceding ten years for the locality in which the heating system is to be installed.

For the district around Toronto, for instance, this figure is taken at 10 degrees below zero. Therefore when a temperature of 70 degrees Fahrenheit inside is desired, the difference inside to outside is calculated at 80 degrees.

Up to the present time the American Society of Heating and Ventilating Engineers has not issued any data in its annual "Guide" that would differentiate in this respect between buildings having little or no heat retaining capacity in their construction, and those that have been specially designed and constructed with this object in mind.

The absurdity of adhering to the formula now in use can be simply illustrated by referring to several buildings here in Ontario that have not gone below 30 degrees above zero during the past two winters, although the outside temperature has dropped to 17 degrees below zero, and yet they have no heating plant installed in the buildings. The only heat available to keep them above the mean temperature outdoors during periods of extremely cold weather is supplied by the sun and the earth.

To raise a building of this construction from 30 degrees to 70 means multiplying the heat units required per hour per degree difference by 40, whereas if the usual figure of 80 is employed the plant will be 100 per cent larger than is necessary.

Two years ago the writer submitted a paper on the subject, "Time Lag as a Factor in Heating Engineering Practice," to the American Society of Heating and Ventilating Engineers (*Heating, Piping, and Air Conditioning,* July, 1929.)

Since that time further opportunities of putting the data then available to practical test have been presented. As a result, an office building has been experimented with and temperature records have been kept for two winters. These records prove that a reduction of over 50 per cent in heating plant from normal still leaves the plant much too large inasmuch as the temperature of the water in the system is considerably below an efficiency level and in consequence fuel consumption is far from being as satisfactory as it might be.

Arrangements are being completed this fall to further reduce the amount of radiation so that the cut, as compared with normal requirements, will be over 60 per cent. Recording thermometers will continue to give outdoor, indoor, and boiler water temperatures, so that evidence should be available in a few months as to whether we are not confronted with altogether new possibilities in heating.

These results are corroborated by Dr. Livingston's experiences in the Canadian Government's medical station on Baffin Island, and in scores of other buildings that have been erected throughout northern Canada during the past decade.

Any persons who are interested in such developments can be provided with evidence for which space is not available here.

THE ENGINEERS' OPPORTUNITY

That the conclusions we have arrived at in Canada are not opposed to the trends of engineering opinion in the United States can be noted from the paper by Prof. F. B. Rowley, director of engineering laboratory, University of Minnesota, Minneapolis, "Essential Elements for Determining Heating Plant Requirements," given at the semi-annual meeting of the American Society of Heating and Ventilating Engineers, June, 1931 (*Heating, Piping, and Air Conditioning,* July, 1931). The position of that Society on this subject may be gathered from the following quotation: "This heat lag is caused by the stored-up heat in the wall and depends upon its heat capacity.

"The effectiveness of this heat capacity depends upon the conductivity of the wall. If the conductivity is low, it will last for a longer period of time than it will if the conductivity is high. The extent to which this heat capacity will affect the maximum requirements of the heating plant will depend not only upon the capacity and the conductivity of the wall, but upon the length of time during which the minimum outside temperatures prevail. It would seem that it can best be taken into account by a thorough study of the thermal properties of walls together with an analysis of weather bureau records.

"From this analysis, outside temperatures may be selected for determining the maximum heating plant requirements which will apply to various types of construction. The necessity of considering thermal capacity of the structure as an element in calculating maximum heating plant requirements has been recognized by the American Society of Heating and Ventilating Engineers and an extended research program is under way at the Research Laboratory." He concludes his paper with this statement: "The factors which at present seem to require more information in the problem of calculating maximum heating plant requirements are—*first,* a more comprehensive study of weather bureau records; *second,* a definite recognition of the heat capacity of walls."

WHITHER, AIR CONDITIONING ON THIS NEW BASIS?

If 60 per cent can be omitted from ordinary heating plant requirements in such a structure, the way is immediately open to utilize the benefits of air conditioning, because its cost will now be well within the limits we now set on hospital construction.

Basing an opinion on the performance of a gas heated radiator, without water or steam, with a fan delivering air through the radiator, in a building of this type 50 feet by 28 feet with a 14 feet ceiling, without storm sash or weather stripping in either windows or doors, the writer is fully convinced that in the very immediate future air conditioning units for individual rooms in the type of hospital we are considering will be provided at no greater cost than for a hot water heating system in an ordinary building today. Such units will deliver air humidified or dehumidified as necessary, with the necessary air turbulence and varied direction as demanded by Dr. Bulmer. Filtering should also be a simple matter and cooling in summer in a building with adequate heat resistance will be no more difficult than heating a building with water well under 140 degrees in sub-zero weather.

COOLING WITH COLD WATER FROM THE DOMESTIC SUPPLY

If heat transmission from outside is reduced to the practical minimum, what do the following figures signify? July 1, 1931—temperature of outside air as given by weather bureau in Toronto 100 degrees Fahrenheit, water at City Hall 46 degrees Fahrenheit; July 2, 1931—air 97 degrees and water 51 degrees. To the writer, they indicate that a great deal of discomfort suffered in Toronto this summer could have been mitigated if we had just used some horse sense and the wonderful facilities with which nature has endowed us.

INSIDE SURFACE TEMPERATURES AT WALLS AND WINDOWS

This subject is very fully dealt with by Paul D. Close, technical secretary, American Society of Heating and Ventilating Engineers, in his paper "How Comfort is Affected by Surface Temperatures and Insulation" (*Heating, Piping, and Air Conditioning,* September, 1930).

He states, "Since the rate at which heat is given off from the body by radiation increases as the temperature difference between the body surface and the wall and ceiling surface increases, the sensation of chilliness will increase to some extent as the wall surface temperature decreases, unless the increased loss of body heat by radiation is counter balanced by an increase in the room temperature.

"Likewise, the less the heat resistance of the wall, the lower the interior wall surface temperature for the same outside temperature, and the greater will be the sensation of chilliness for the same effective temperature.

"Inasmuch as the wall surface temperature is a function of the overall heat resistance of the wall, the addition of a given thickness of insulation will materially increase the surface temperature, and permit the maintenance of normal effective temperature, provided the relative amount of window surface is small. Under the circumstances, the insulation will result in a double heat saving: *first,* that due to the lower temperature difference and, *second,* that due to the retarding of the rate of heat transfer through the wall."

In this connection he gives diagrams to show how an inside surface temperature may be raised from 51.4 degrees to 62.3 degrees by adding insulation. The inside surface temperatures for the walls of the office building previously referred to under the same conditions would be about 67 degrees.

Regarding windows, Mr. Close continues, "Window surface temperatures for single glass are considerably lower than wall surface temperatures on a cold day. Hence, if the exterior walls of a room contain an excessive amount of glass, double or triple windows will materially reduce the loss of heat from the body by radiation."

Using "single glass,—on a zero day, with an inside temperature of 70 degrees, the glass surface temperature will be 17.3 degrees F. With double glass the surface temperature will be 49 degrees F. . . . and with triple glass the surface temperature will be 56.9 degrees F."

From the above it will be seen that in the development of air conditioning in hospitals, the use of single windows, especially if they have metal frames and sash, will create trouble by increasing radiation from the body, and also because of condensation on these cold interior surfaces.

PANEL WARMING

Those who are interested in this question of surface temperatures should study the paper on "Panel Warming" by L. J. Fowler, London, England, given at the Philadelphia meeting of the A.S.H.V.E. in January, 1930.

This system of heating developed in England has many advocates all over the world. I am inclined to think that its application to hospitals on this continent would not be attended by all the advantages claimed for it in England.

In any case, its principal value in increasing wall and ceiling surface temperatures can be obtained in other ways as outlined above, and still leave heating pipes and connections accessible, which my experience with workmanship on this continent would lead me to believe is very necessary.

ELIMINATION OF NOISE

The stoppage of heat waste and the division of the hospital into units for air conditioning will necessarily contribute to quieter conditions inside.

Better windows, more sound-proof doors, heat stopping and absorbing construction, will all play a part in making the building not only more comfortable to the skin, but also more soothing to the troubled spirit. That in itself will be a tremendous gain, because "soothing" is not a term that can be applied to many of our modern hospital structures, apart from the personal services rendered by doctors and nurses.

ELIMINATION OF CONCEALED AIR SPACES IN WALL AND ROOF CONSTRUCTION

This paper would be incomplete if it did not include a word of warning to those who desire to adopt methods of construction such as have been suggested. The greater the decrease in heat conductivity of walls and roofs used, the greater is the need for eliminating all concealed air spaces beyond the insulation. Condensation in such spaces will inevitably occur. It is therefore absolutely necessary that work of this kind be undertaken by those who have had ample experience with construction embodying high resistance to heat transfer.

OTHER STRUCTURAL CONSIDERATIONS

The study of air infiltration through walls and the stoppage of heat waste cannot help but raise the question of keeping moisture out of them either from the outside or inside.

Lightness in wall units that have high heat resistance leads to considerations of reducing the loads on the structural members of our buildings.

These thoughts cannot be developed beyond the point of indicating that, in the immediate future of building high heat capacity buildings, coverings of non-corrosive metals will be as commonly considered for exterior walls

as for roofs. These coverings will be wind and water-tight, they will be backed by adequate thickness of insulation to give high heat capacity as well as low heat conductivity. An enormous saving in the dead weight to be carried by the structural members will result.

The total product will be buildings dedicated to the service of mankind, contributing a better share toward relieving the sufferings of their occupants, and possibly providing a more welcome relief to the pockets of the great army of workers in the hospital field.

If, also, the living and working conditions of those entrusted with the healing and care of the sick can be bettered, even in slight degree, let us be not afraid because some of the ideas herein expressed may seem unfamiliar.

Dr. L. B. Rogers Goes to Hollywood Hospital

Dr. L. B. Rogers, who for a number of years has been superintendent of the St. Francis Hospital, San Francisco, has accepted the position of director of Hollywood Hospital, Hollywood, California. Dr. Rogers, one of the best known administrators on the Pacific Coast, was medical director of the United States Veterans' Bureau Hospital, New Haven, Connecticut, before going to St. Francis Hospital.

THE USE OF OUT-PATIENT FACILITIES IN EXTENDING PREVENTIVE AND PUBLIC HEALTH WORK

By Lucy Clare Finley

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Dispensary work was begun in the United States approximately 150 years ago. The story of its development, if given in detail, would present a thrilling account not only of the progress of medicine but of the awakening of community consciousness and its responsibility for health projects.

The growth has been slow, perhaps spasmodic at times, and more rapid in some sections than others. Geographical locations have affected the interests and advance made.

The development of industry, the surging of people from rural sections to the cities, immigration, until a few years ago, have played an important part in creating health problems and presenting new angles of approach in undertaking preventive work. All these factors have increased the burdens of the medical profession and its allies, the public health association and kindred organizations.

One hundred and thirty-six years ago the third oldest dispensary in the United States opened its doors. Realizing that many eligible for free care could not for physical reasons visit the dispensary, a visiting physicians service was inaugurated which has continued to the present time. A bath tub was later installed in the dispensary to enable baths to be taken by those whose home facilities were inadequate. Not until probably 100 years later did public baths come into existence.

The forerunner of the public health nurse is seen in the provisions made by this same dispensary to provide nursing care in the homes visited by the physicians.

The present day out-patient department represents the adult growth of the original dispensary. The day has long since passed for merely dispensing drugs without knowing anything concerning the social and economic factors of a patient's environment.

It matters not whether free, part-pay, or full-pay patients are accepted; whether the work is conducted by state, municipal, or private interests. The responsibility of those doing the work to spread the gospel of good health, the value of preventive work, is just the same. The medical profession cannot ethically advertise, but good service rendered in any out-patient department will sell the investment. The interest paid will represent a

physically improved community and more adequate facilities for the care of the chronic sick, the tuberculous, the insane, and the convalescent.

Every out-patient department possesses a wealth of material to be used in acquiring the types of care mentioned. Are these facts being used sufficiently to influence the proper source of help? The various types of disease which affect not only the patient but his whole family, the loss of time and money as represented in wages reduced or cut off, the effects of poor housing, the breaking up of homes because of long hospitalization or poor social conditions, fall within the available facts which could be compiled from out-patient records.

The medical profession has undertaken a big educational project in developing out-patient department work. The value of early diagnosis, proper interpretation of treatment, the relationship of the patient's condition to those of his family or friends with whom he lives, proper follow-up through medical social workers or other social and nursing organizations, result in a better physically minded community. These factors result also in a closer connection with preventive work. The real aim is educating the public, thereby reducing disease to a minimum. Reduction would be an economic factor in lowering taxation.

Ignorance of physical conditions and the meaning of certain symptoms with attendant suffering is not confined to any one class of society. Medical care today, we all know, is available to the two extremes of society, the very rich and the very poor. Now, perhaps as never before, we are confronted with a situation involving the health of thousands due to the business depression. Since the armistice we have become accustomed to relating all our ills, whether physical or financial, to the World War. The business depression is supplanting the latter and to those engaged in preventive and public health work the depression has issued a real challenge.

Some out-patient departments advocate health examinations at regular intervals as part of preventive work. Should not this phase of medical work be particularly stressed at this time? So many are living on reduced rations and unbalanced diets. Why should we wait until serious damage has been done? Are we to reap in this country the same harvest of sick people that many European countries did following the armistice? Is there not a challenge to the medical profession, social workers, and the public health field to begin planning now for more intensive and extensive work among those financially affected? Considered from a cold financial angle alone, it will be much cheaper to enlarge the field of preventive work than calmly to wait for results.

If we do nothing we will certainly in a few years have more cases of

tuberculosis, rickets, etc. with which to contend. If no action is taken the financial outlay for medical services will be increased beyond all known expenditures.

We are all familiar with the various clinics which form the framework of an out-patient department. Certain phases of the work as related to the extending of preventive and public health work will be considered. It is necessary to remember that any discussion of this subject must be linked with social and economic features from which it cannot be divorced.

The general group attending any out-patient department is a very complex one. Varying degrees of intelligence are represented. Some are transients for whom the results will probably be intangible. Some suffer from "clinicitis," others have delayed securing medical care because pride has been a deterring factor in accepting free care. The composite picture is an interesting one but the individual, not the composite group, is the basis of consideration.

What does the lay public know about the effects of sinusitis, about which the ear, nose, and throat clinicians are greatly concerned? How many of the laity and also patients realize that about 20 per cent of the children requiring tonsillectomies and adenoidectomies have sinusitis? Unless school children suffering from this condition are properly treated and cured, about 25 to 30 per cent will become deficient in school and in adult age will become chronic cases. The disease is curable in the early stages, but if allowed to continue until surgery is required, the results are apt to be unsatisfactory. Several months' to two or three years' good care will often be necessary. Proper follow-up by the clinic as well as careful interpretation to the patient, parents, or guardians is very essential.

Another condition which should be seriously considered because of its physical and economic effects is chronic catarrhal deafness. This is said to cause the highest percentage of all deafness and is the result of repeated or chronic infections of the nose, sinuses, and nasal pharynx. It can be prevented only by eliminating early infections, which can be done by continued attendance in out-patient departments. Many general diseases, such as nephritis and cardiovascular disorders, are a result of these continued upper respiratory infections. They can be prevented by proper treatment. Think of the financial element represented in vocational handicaps resulting from these preventable conditions.

The cardiac clinic of any out-patient department has constantly presented to it cases of human physical wreckage which could have been salvaged if early diagnosis and treatment had been made and advised. A white woman, 50 years old, married, with five children, was recently examined in a cardiac clinic. Her only complaint was a "fluttering heart." The Wassermann

reaction was strongly positive. The diagnosis made was luetic heart—luetic aortic insufficiency. When she acquired syphilis is unknown. Immediately one wonders: Are the children infected and if so what complications have they developed incidental to lues?

To this same clinic a white man reported who prior to examination had for several years spent much time in various hospitals, remaining only long enough to improve slightly. He was a telephone lineman capable of earning $42 weekly, but his earning power was greatly reduced by his physical condition. Through the medical social worker in the clinic, carrying out the suggestion of the clinician, the type of occupation was changed to meet the physical limitations of the patient. He is now employed as a watchman earning only $22 weekly, but he has been working regularly for three years, and during this period has not been hospitalized. This represents good medical and social follow-up and proves conclusively the use of out-patient facilities in extending preventive and public health work.

It is appalling when one realizes that probably 70 out of every 100 children with chorea and rheumatic infections in the first decade of life will develop damaged hearts resulting in death before the age of 20. The educational side of the work is of vast importance. If the clinicians through the assistance of social service, nursing, and other educational agencies could carefully instruct the families of the patients in the value of prolonged bed care and the importance of careful attention to early childhood diseases, the percentage could be cut in half.

It is an accepted fact that rheumatism runs in families. This makes early examination of all members essential when one has been diagnosed. Two hundred and fifty thousand children in this country are said to have incurable rheumatic hearts and the death rate for all ages is 205 to every 100,000 population. What are your city or state facilities for providing hospital or convalescent care for cardiac cases whose home conditions prevent the giving of proper care?

No out-patient department can overlook the importance of prenatal and postpartum clinics as related to preventive and public health work. A prenatal clinic is interested in the prevention of toxemia of pregnancies, which may result in convulsions and fatalities. It also wishes to ascertain if social and chronic diseases exist and arrange treatment. Another important factor is determining causes that may alter the type of delivery which the condition of the patient may demand, such as version, Caesarian, forceps, etc.

From the postpartum angle the general debility of the mother incident to childbearing must necessarily be determined. The stressing of the value

of examination on the part of clinicians, social workers, nurses, etc. will help to prevent, first, chronic invalidism subsequent to sub-involution of the uterus and birth injuries; second, development of cancer as a terminal condition if corrections are not made. There is much that could be said about the ramifications of these conditions. The medical, economic, and social value of examination and follow-up work is very obvious.

Let us consider some of the troubles of the ophthalmologist working in a clinic. Trachoma, glaucoma, and interstitial keratitis present large medical, social, and economic problems extending far beyond the out-patient department. Do not overlook the vast number of school children considered dull who, if properly refracted and fitted with glasses, would be able to take their proper scholastic rank. The intelligence limitations of the patient in carrying out instructions should not be overlooked. For all these conditions the public at large may be considered involved and this increases the medical and educational features of the work.

Psychiatric work has a very definite place in out-patient work. It should not be conducted merely along adult lines but should be closely linked with the pediatrics division. Who are the children having chorea with a psychiatric trend or those who in the early years present habit problems? Habits formed early, if allowed to develop, often cause conditions which result in much suffering for the patient and his family. These habits may affect the patient in the classroom or on the playground and seriously influence any adjustment to working conditions. Reëducation of the parents is closely associated with juvenile psychiatric work.

Treatment of the psychiatric adult must always take into consideration the home environment. An educational process is as essential as in juvenile work.

The diabetic, nephritic, hypertension, rachitic, and gastro-intestinal cases present special problems because of the diet element and prolonged care. It is not sufficient to diagnose, prescribe diet, and give a date for the return visit. Does the patient possess sufficient intelligence to carry out instructions? What are the economic factors? How may he obtain insulin? Does he know how to make food substitutions and weigh his food? Demonstration and instruction by a nutritional adviser which will show types of food to be used, explaining market as well as food values, will do much to reduce the period of treatment and the cost.

Medical science has done much to reduce the cost of care and loss of time for those suffering from varicose veins by being able, in the out-patient department, to give treatment formerly obtained only in the hospital. The present method of injection which soon places the patient on his feet has involved many in its beneficial and preventive effects.

No discussion of preventive and public health work is complete without considering the two diseases which, largely through the World War, have had public attention focused upon them—gonorrhea and syphilis. No longer are these two spoken of with bated breath. Only by coming out openly and preaching the value of early diagnosis and necessity for prolonged care have inroads been made. The sources of contact must be ascertained and hospital care obtained for the infectious cases, where the physical safety of the family or public at large is at stake. Too much emphasis cannot be placed upon the devastating physical and mental conditions resulting from lack of treatment. Paresis and locomotor ataxia require large expenditures for treatment.

Through careful follow-up and proper educating of the public much can be done to prevent the waste of human life and the increase in population of hospitals for mental diseases. Much salvaging can be done by careful interpretation on the part of the clinician and those allied with him. Careful and early examination of various members of a patient's family will often be required to determine the congenital cases. This should be considered routine work.

The admitting office of an out-patient department forms the first contact with the vast group applying for medical care. If conducted by trained personnel it will be watchful for the problems, economic and social, which will later confront the clinicians. Those who can pay for private doctor care will be eliminated. Particularly should the department watch for those who will strive to take advantage of any economic situation such as now confronts the whole country. Many will attempt to obtain care on the ground that being tax payers entitles them to free care. It is also possible at the present time for the admitting office to coöperate with the medical profession by relieving its burdens due to the excessive demands made for charity work. Much data to be used in furthering preventive and public health work may be obtained through this same department.

The night clinic work of an out-patient department now presents a decided economic feature. It may be necessary to do more to help those requiring treatment to obtain it at night when day attendance would mean loss of money and probably the job. There are too many applicants for any job for the holder to only lightly consider its value to him.

The trend of today is to make the out-patient department and the hospital more and more a great teacher. Not forgetting that the chief function of each is the care of the sick, it is also decidedly the maker of doctors. It has become an indispensable part of a medical education. Formerly the lecture room work of a medical school was followed by perfunctory ward walks with occasional clinic visits. In the evolution of medical instruction the arena of teaching has been transferred from the

lecture room to the hospital and out-patient department. These two form the real school for the student. The use of out-patient facilities in extending preventive and public health work must necessarily embrace education of the laity and the embryo physician. We must give him the vantage ground of the out-patient department for regular months of observation and manual dexterity, and allow him many hours with patients, seeing, hearing, questioning, recording, analyzing, as a basis for conclusion. Dr. Osler has said that, "For the student of medicine and surgery it is a safe rule to have no teaching without a patient for a text," and that "the best teaching is that taught by the patient himself." The out-patient department makes available to many types of the sick or physically subnormal the medical and nursing resources of the hospital.

The foundation on which reposes the happiness of the people of the country is public health. The care of public health is the first duty of a community. We, as hospital executives, are challenged by our present economic status to renew our efforts, sanely and courageously, as leaders in a battle to allay the suffering, anxiety, and disturbed human relations which are incident to sickness and death. As in war success comes to those who have the heaviest artillery and the ablest generals, so in this war between humanity and disease we must have sufficient funds and the wisest leadership.

In closing, we are again faced with the realization that human beings have economic value as individuals, and in the aggregate such value transcends all others. Any community's greatest asset is the human beings who comprise it. When they are put out of action or destroyed the community loses some of its wealth. When they are preserved and brought up to maturity with the least amount of waste, the community is enriched through the productiveness of its citizens.

At a time when all nations seem to be enduring so much sadness we are called upon again to apply the principles enunciated by the great Pasteur, given to a group of students at the Sorbonne University about 39 years ago: "Young men, have confidence in these powerful and safe methods of which we do not yet know all the secrets. And whatever your career may be, do not let yourselves be discouraged by the certain hours of sadness which pass over nations. Live in the serene peace of laboratories and libraries. Say to yourselves first: 'What have I done for my instruction?' and as you gradually advance: 'What have I done for my country?' until the time comes when you have the immense happiness of thinking that you have contributed in some way to the progress and to the good of humanity. But, whether our efforts are not favored by life, let us be able to say, when we come near the Great Goal, 'I have done what I could.' "

THE SANATORIUM'S RESPONSIBILITY IN SAFEGUARDING THE HEALTH OF ITS EMPLOYEES

By E. B. Pierce, A.B., M.D.
Superintendent, Molly Stark Sanatorium, Canton, Ohio

THE TUBERCULOSIS SANATORIUM, the refuge of those afflicted with a communicable disease, is definitely bound to protect the patients and healthy employees from the sick employee, to supply such conditions of labor and living as are conducive to health, and to protect the employee from the disease of the patient.

We have about 70,000 sanatorium beds in this country. We have also an average of one employee to 1.5 patients, or a total of about 46,000 employees. In the mind of the layman, each one of these is open to direct exposure to tuberculosis and therefore in great danger, while in reality only one in four comes in contact with the patient.

Recent writers in this country and abroad are calling our attention to the methods of prophylaxis used in sanatoria. They consider them inadequate for the protection of the employee. The sanatorium physician minimizes the danger of the spread of the disease to the healthy employee, because of the rareness of such occurrences. Repeated investigations have shown that employees in tuberculosis hospitals, even before the cause of infection was known and when no particular precautions were taken, did not contract the disease in greater number than those working outside. The examinations of dust, air of the rooms of patients, bed linen, and dishes have indicated that danger of contagion from these sources is not probable. Yet, who has not had the experience of having a supposedly healthy employee become acutely ill with tuberculosis? Such an experience indicates the need of closer supervision of the health of the employee.

A recent investigation which included the visitation to a number of sanatoria and information gathered from other representative institutions disclosed the fact that 15 per cent make a very complete examination of all employees on beginning employment. This covers acute infections, deformities, heart and chest conditions, x-ray of chest, and Wassermann. Thirty-five per cent make an x-ray of the chest. Five per cent examine nurses only. Three institutions use the tuberculin test. Massachusetts requires its sanatoria to vaccinate all employees, to give the Schick test to those who come in contact with children and immunize the positives, to give a Widal to all food handlers, to examine stools and urine, and to immunize against typhoid. No attempt is made to check on tuberculosis.

Fifty per cent of these institutions investigated accept the employee as he comes, without a medical examination. The small sanatorium with fewer employees is no greater an offender than the larger. The institution with 200 to 400 workers seems more disposed to give new employees attention.

All institutions attended to the immediate medical needs of workers. Liberal sick leaves, free medical attention, and hospitalization are the rule. Instruction in prophylaxis is given by all to those coming in direct contact with patients. The most striking observation is the marked indifference to the fact that tuberculosis is communicable. We are more afraid of the fear of tuberculosis than of the disease itself.

When an employee becomes ill with tuberculosis it is certainly of great importance to us to know if this disease was acquired while on duty or if he had it on entering our employ. Our responsibility to the worker demands that we know:

1. His physical condition on employment.
   (a) Is he a bad risk medically, because of physical defect?
   (b) Is he a danger to patients or employees because of disease?
2. His protection from the possibility of acquiring disease from patients.
   (a) Are the conditions of labor and living conducive to health?
   (b) Are the methods of prophylaxis used in the sanatorium performing their function?

The determination of the employee's fitness can be ascertained only by examination at the beginning of employment. This should cover:

1. *Acute infections.*—Includes the examination for typhoid and diphtheria carriers. It is interesting to note that outside of Massachusetts this is rarely done.

2. A general physical test to exclude hernia, deformities, and conditions of the heart and kidneys.

3. *Venereal diseases.*—A Wassermann is desirable on all employees, especially food handlers. Smears should be made when indicated. What is to be done with the individual reactor is a problem for the superintendent. There is no uniformity of opinion in this matter, excepting on one point, that acute conditions must be treated and the employee isolated until he is no longer a menace.

4. A chest examination or an x-ray of the chest. Our chief interest is tuberculosis and even though no other test is made, this is the least we can do.

The tuberculin test is used in some institutions. The results may be interesting but the interpretations are doubtful.

The results of each employee's examination should be placed on record and kept on file. A card system is necessary. Workers often remain for long periods and chests should be reëxamined at least once each year. A health card presented to each employee would promote interest.

Sanatoria have three groups of employees:

1. Those whose duties rarely bring them in direct contact with patients. We must bear in mind that many who never see the patients come in direct contact with them through the handling of food.

2. Those who have a slight direct contact, such as waitresses and janitors.

3. The physicians, nurses, and attendants who are in close direct contact with the patient.

The first two groups should have instruction regarding the essential hygienic measures used to promote health, which include habits of bathing and rest, sleeping in well ventilated rooms, the dangers of colds, the careful cleansing of the hands, the risk of putting articles into the mouth and of eating with unwashed hands. This instruction should be given in writing and also directly from the department head.

The group whose duties bring them in close contact with the patient should have repeated personal instruction along the same lines, emphasizing the necessity of care in handling the discharges of the patient, the frequent change of their own clothing, and the repeated cleansing of the hands with soap and water. This group should be reëxamined each six months for the detection of tuberculosis.

The fact that so few sanatoria examine employees indicates that they have an inadequate staff, or do not realize the danger, or consider the instruction to patients and the methods commonly used to control contagion sufficient. We believe the last explanation is the correct one.

The conditions under which employees live and work in sanatoria are conducive to health. An abundance of good food and country air and pleasant living quarters are the rule. The work is not exhausting. There is opportunity to obtain sufficient rest. A daily sick call gives workers an opportunity to have early medical attention.

Sanatorium patients are instructed to cover the mouth and face when coughing or sneezing. The best material for this purpose is a paper napkin, which can be used once and destroyed. Moist sputum is considered the least dangerous. The patient is instructed to expectorate into a paper cup, which is frequently changed and burned with its contents; or to use a paper napkin, which is then placed in a convenient paper bag and burned. Attention is given to the care of the teeth. Frequent brushing is insisted upon. The dentist is a very important member of a sanatorium staff.

Cleansing of the hands after the toilet and before eating is obligatory. The patients are instructed to keep the hands from the mouth and not to put articles into the mouth. The bed linen is changed frequently.

The attendants are instructed to keep the hands clean, to change uniforms frequently, to accept no donations of candy or food from patients, and to handle their own food with clean hands. The floors are gone over with a vacuum sweeper. The beds and furniture are frequently washed with soap and water. Dishes are sterilized. Each patient has an individual thermometer. Paper drinking cups are used in dispensing medicine.

Numerous tests have been made of sanatorium operations. Dishes cleansed by modern methods are known to be bacteria-free. Bed linen has been proved unlikely to spread contagion. Dust collected from wards showed no evidence of the escape of the bacilli, and now the vacuum cleaner reduces the element of dust contagion to a minimum.

That the hygienic and prophylactic measures enumerated have proved adequate is shown also by the experience of men who have had charge of sanatoria for a period of years. Not one has become alarmed at the spread of tuberculosis among nurses and attendants who are in direct association with the patients. Occasionally an employee has become ill with tuberculosis, but the incidence has been no higher than the normal rate. The most recent study of this problem shows a high proportion of tuberculosis among nurses employed in general hospitals. The same study states, "It is very rare to have a sanatorium nurse break down with tuberculosis." Another study of over 700 employees states, "The incidence of tuberculosis during and after employment in a tuberculosis hospital is very low—perhaps less than 2 per cent." Another writer states, "No case of pulmonary tuberculosis has been known to develop among many hundreds of healthy employees at the Trudeau Sanatorium during 45 years."

This evidence bears out the contention that the sanatorium superintendent who sees that these methods of prophylaxis are carried out in the institution under his supervision is doing all in his power to prevent the spread of disease from patient to employee.

SUMMARY

1. A study of a number of representative sanatoria shows that a very small percentage are making complete routine examinations of their employees at any period of their employment. Fifty per cent made some examination, but only 42 per cent examined for tuberculosis.

2. The first consideration of the sanatorium should be to protect the patient from the employee. To accomplish this, sanatorium heads are urged to make an initial complete examination of all employees.

3. The second consideration is to protect the employee from the patient.

4. The prophylactic measures taken in practically all institutions caring for the tuberculous are shown to be sufficient to prevent the spread of contagion from the sick to the well.

REFERENCES

1. Baldwin: United States Veterans Bureau Medical Bulletin, Jan. 1930.
2. Fishberg, M.: Correspondence, J. A. M. A., August 29, 1931.
3. Gordon, B. and Cashman, W. M.: Tuberculosis in Workers after Residence in a Tuberculosis Hospital, J. A. M. A., May 24, 1930.
4. Heron and Chaplin: The Relation of Dust in Hospitals to Tuberculous Infection, Lancet, Jan. 6, 1894.
5. Hodgson, Violet H.: Tuberculosis Prevention, Am. J. of Nursing, Feb. 1931.
6. Myers, J. A.: The Prevention of Tuberculosis among Nurses, Am. J. of Nursing, Nov. 1930.
7. Myers, J. A.: Recent Facts of Transmission of Tuberculosis, J. A. M. A., August 1, 1931.
8. Ross, E. L.: Tuberculosis in Nurses, The Canadian Nurse, June 1930.

Hospital Library and Service Bureau

Charlotte Janes Garrison, Director

SOME OF THE INTERESTING PUBLICATIONS received from hospitals during the past months include: information for patients, schedule of visiting hours, rates, diet lists, birth announcements, rules for interns, constitution and by-laws of staff and hospital, school of nursing catalogues, annual reports, and standing orders.

Among the hospitals contributing literature were: Cook County, St. Luke's (Chicago), Evanston, Children's Memorial, St. Francis (Trenton, N. J.), Sutter, Palo Alto, Winifred Masterson Burke, St. Luke's (San Francisco), Lying-in (New York), Presbyterian (Denver), Santa Monica, West Suburban, Mercy (Bay City, Michigan), University of Iowa.

Available for circulation are the following:

Manual of Hospital Management for U. S. Marine Hospitals, 1931.
Course in Hospital Administration, Columbia University, July 6-August 14, 1931.
Fundamentals in Hospital Administration, Malcolm T. MacEachern, M.D., reprinted from Western Hospital Review, July, 1931.
Linen Issuance and Inventory, Rochester General Hospital, 1931.
Report on Nursing Department Costs Pasadena Hospital, California Taxpayers' Assn., 1931.
Middle-Rate Plan for Hospital Patients. By Mary Ross. Rosenwald Fund, Chicago, 1931.
Credit and Collection Practices of Hospitals, Policy Holders' Service Bureau, Metropolitan Life Insurance Co., New York City, 1931.

Books Received

PAPYRUS EBERS. By Cyril P. Bryan, D. Appleton & Co.
REACHING OTHER MINDS. By Davida McCaslin, F. S. Crofts Co.
CONFERENCES, COMMITTEES, CONVENTIONS, AND HOW TO RUN THEM. Harper & Bro.
COMMUNITY CONFLICT. Associated Press, The Inquiry.
CREATIVE DISCUSSION. By Alfred D. Sheffield, The Inquiry.
TRAINING FOR GROUP EXPERIENCE. By Alfred D. Sheffield, Associated Press, The Inquiry.
THE BELOVED PHYSICIAN. By R. McNair Wilson, Macmillan Co.
A TEXT-BOOK OF ANATOMY AND PHYSIOLOGY. By Kimber and Gray, Macmillan Co.
A TEXT-BOOK OF CHEMISTRY. By Goostray and Karr, Macmillan Co.
YOUR MONEY'S WORTH. By Chase and Schlink, Macmillan Co.
NUTRITION AND PHYSICAL FITNESS. By L. Jean Bogert, W. B. Saunders Co.
PERSONAL HYGIENE APPLIED. By Jesse F. Williams, W. B. Saunders Co.
THE WRITING OF MEDICAL PAPERS. By Mellish-Wilson, W. B. Saunders Co.

APPLICATIONS FOR INSTITUTIONAL MEMBERSHIP

JUNE 21 TO SEPTEMBER 17, 1931

Alabama

Birmingham Baptist Hospital.....Birmingham
Goldsby King Memorial Hospital.....Selma

California

Garfield Hospital .....Monterey Park
Japanese Hospital .....Los Angeles

Illinois

Paris Hospital .....Paris

Louisiana

New Fenwick Sanitarium.....Covington

Michigan

Sturgis Memorial Hospital.....Sturgis

Minnesota

New Prague Community Hospital, Inc.....New Prague

Mississippi

Biloxi Hospital .....Biloxi
Fite Hospital .....Columbus
Geo. C. Hixon Memorial Hospital.....Electric Mills
Natchez Sanatorium .....Natchez

New Jersey

Newark City Hospital.....Newark

New York

Postdam Hospital .....Postdam

North Carolina

Leaksville Hospital, Inc.....Leaksville
Lowrance Hospital .....Mooresville

Pennsylvania

Citizens' General Hospital.....New Kensington
Elwyn Training School.....Elwyn
Jeanes Hospital .....Philadelphia
Northwestern General Hospital.....Philadelphia
Tuberculosis League Hospital.....Pittsburgh

Tennessee

Chamberlain Memorial Hospital .....Rockwood
St. Thomas Hospital.....Nashville

Texas

Dallas Medical & Surgical Clinic and Hospital.....Dallas
Seton Infirmary .....Austin

Utah

William Budge Memorial Hospital.....Logan

Vermont

Henry W. Putnam Memorial Hospital.....Bennington

West Virginia

St. Mary's Hospital.....Huntington

Wisconsin

West Side Hospital.....Milwaukee

Canada

Hazelton Hospital.....Hazelton, B. C.
Mount Sinai Hospital.....Toronto, Ont.
St. Rita Hospital.....Sydney, N. S.
Toronto Hospital for Incurables.....Toronto, Ont.

APPLICATIONS FOR PERSONAL MEMBERSHIP

JUNE 21 TO SEPTEMBER 17, 1931

Alabama

Thorson, Myrtle O., R.N., supt., Mobile Infirmary, Mobile.

Arkansas

Childress, Mrs. Katherine, R.N., supt., DeQueen Hospital, DeQueen.

California

Ginsburg, H. M., M.D., dir., General Hospital, Fresno.
Hassett, May A., asst. dir. nrsg., The Samuel Merritt Hospital, Oakland.
Ruddy, Sarah A., R.N., supt., Long Beach Community Hospital, Long Beach, Calif.

Connecticut

Northrop, Edwin C., trustee and treas., Waterbury Hospital, Waterbury.
Silberman, Mrs. Dorothy, chrmn. tr. sch. comm., Mount Sinai Hospital, Hartford.
Sperry, Roger S., trustee, Waterbury Hospital, Waterbury.
Zeman, Mrs. B., vice-pres., Ladies' Auxiliary, Mount Sinai Hospital, Hartford.

District of Columbia

Truman, A. W., M.D., med. dir., Washington Sanitarium and Hospital, Takoma Park.

Florida

Ferris, Mrs. Kate W., mem. bd., Orange General Hospital, Orlando.

Georgia

Alford, Mrs. Celia Kelley, secy., Wesley Memorial Hospital, Emory University.
Jones, E. Mae, R.N., supt., Rawlings Sanitarium, Sandersville.
Spurgeon, Carrie, supt. nrs., Wesley Memorial Hospital, Emory University.
Swanson, Clara, R.N., supt., Strickland Memorial Hospital, Griffin.

Illinois

Magnus, Alexander B., M.D., med. dir., Chicago Sanatorium, Chicago.
Noble, Wm. L., M.D., secy., West Side Hospital, Chicago.
Pois, Joseph, 1432 Monadnock Bldg., Chicago.
Pollock, M. D., M.D., pres., City Public Hospital, Decatur.

Indiana

Anderson, J. L., D.D., supt., Methodist Hospital, Gary.
DeVine, L. Gertrude, R.N., supt., The Mary Sherman Hospital, Sullivan.
Frost, Mrs. Adale O., asst. supt., Methodist Hospital, Indianapolis.

Kinzer, Roy, mgr., Wabash Valley Sanatorium, Lafayette.
Myers, Charles W., M.D., supt., Indianapolis City Hospital, Indianapolis.
Pace, J. V., M.D., supt., Indiana State Sanatorium, Rockville.
Pittman, Denzel M., asst. to adminis., Indiana University Hospitals, Indianapolis.
Rains, Mrs. Rinda F., R.N., supt., King's Daughters' Hospital, Madison.
Reginald, Sister M., supt., Mount Mercy Hospital, Hammond.

Louisiana

Young, F. F., M.D., phys. in charge, New Fenwick Sanitarium, Covington.

Maine

Hiebert, Joelle C., M.D., supt., Central Maine General Hospital, Lewiston.

Michigan

Lathrop, James A., R. T., anesth., Clinton Memorial Hospital, St. Johns.

Mississippi

Braxton, James M., supt., King's Daughters' Tuberculosis Hospital, Meridian.
Fite, Ped. L., M.D., supt., Fite Hospital, Columbus.

Missouri

Anderson, Anna A., supt., Children's Mercy Hospital, Kansas City.
Brunk, Josephine, supt., Kansas City Tuberculosis Hospital, Kansas City.
Cherry, Clementine V., supt., Fitzgibbon Hospital, Marshall.
Chrysostom, Sister, R.N., supt., St. Joseph's Hospital, St. Joseph.
Keith, Mary J., supt., St. Louis Maternity Hospital, St. Louis.
Kirchner, Walter C. G., M.D., med. dir., City Hospital, St. Louis.
Smith, Mrs. J. Herndon, pres., Bethesda Hospital, St. Louis.

New Jersey

Applegate, Howard, pres., Paul Kimball Hospital, Inc., Lakewood.
Gould, Cora E., Ph. G., purch. agent, Orange Memorial Hospital, Orange.

New York

Bentley, Louise C., dir., Syracuse Free Dispensary, Syracuse.
Cottle, Comm. George F., M.D., 1 Gramercy Park, New York.
Fairweather, Frederic H., hosp. arch., Le Roy P. Ward, Inc., 205 East 42d St., New York.
Gifford, Carl J., mgr., Sun-Diet Sanatorium, East Aurora.
Mooney, Jane, R.N., in charge of registr., Clinic of Cornell University Medical College, New York.
Nichols, George, R.A., hosp. arch., Jas. Gamble Rogers, Inc., 156 East 46th St., New York.
Ruppe, John P., M.D., asst. supt., New York Post Graduate Medical School and Hospital, New York.
Warman, Grace A., R.N., supt., New York Nursery & Child's Hospital, New York.

North Carolina

Bagley, E. G., bus. mgr., Biltmore Hospital, Biltmore.
Bell, A. E., M.D., Lowrance Hospital, Inc., Mooresville.
Tyner, Carl V., M.D., pres., Leaksville Hospital, Inc., Leaksville.

Ohio

Clare, Sister Rose, supt., Providence Hospital, Sandusky.
Endres, D. A., asst. supt., Youngstown Hospital, North Side, Youngstown.
Fearney, Frank A., M.D., mem. med. staff, U. S. Veterans' Administration Hospital No. 97, Chillicothe.
Frersing, William H., supt., Deaconess Hospital, Cincinnati.
Gammons, H. F., M.D., supt., Pleasant View Sanatorium, Amherst.
Harmon, E. L., M.D., asst. dir., University Hospitals, Cleveland.
Rice, Samuel W., asst. supt., Youngstown Hospital, South Side, Youngstown.
Sumner, Clarence W., libr., The Youngstown Public Library, Youngstown.

Pennsylvania

Jones, Col. Percy L., M.D., dir., Hamot Hospital, Erie.
Kernan, Kathryn L., supt., Riverview Hospital, Inc., Norristown.

Tennessee

Nance, Edith P., R.N., supt., Chamberlain Memorial Hospital, Rockwood.
Proudfit, Fairfax T., chief diet., Memphis General Hospital, Memphis.
Wharton, May C., supt., "Uplands" Cumberland Mountain Sanatorium, Pleasant Hill.

Texas

Randall, Edward, M.D., pres., bd. mgrs., John Sealy Hospital, Galveston.
Rogers, Dorothy, dir. nrsg., John Sealy Hospital, Galveston.

Virginia

Baldwin, Bessie N., Curdsville.

West Virginia

Fuller, Mabel C., R.N., supt. nrs., Mountain State Hospital, Inc., Charleston.
Warner, Chas. C., bus. mgr., Mountain State Hospital, Inc., Charleston.

Wisconsin

Perssion, Sidney, supt., West Side Hospital, Milwaukee.

Canada

Martin, Stanley T., asst. supt., Regina General Hospital, Regina, Sask.

South America

Solar, J. Smith, hosp. arch., Smith Solar & Smith Miller, Bandera 75, Santiago de Chile.

COMING MEETINGS

Association of Record Librarians, New York, October 12.
American College of Surgeons (Hospital Conference), New York, October 12-15.
American Dietetic Association, Cincinnnati, October 19-21.
Kansas Hospital Association, Hutchinson, October.
Colorado Hospital Association, Colorado Springs, November 10-11.
Committee on the Grading of Nursing Schools, Briarcliff Manor, N. Y., November 20-21.
Iowa Hospital Association, Sioux City, March 10-11.

THE 1931 EXHIBITORS

THE COMMERCIAL EXHIBIT at the Toronto convention is admitted to be one of the most complete that has been staged in the history of the Association. The exhibitors presented an unusually attractive display of equipment, furniture, supplies, and practically everything that is used in the maintenance and operation of our hospitals. These exhibits have been carefully classified and the accompanying list will afford an excellent reference catalogue for future use.

The American Hospital Association and the hospital field is very much indebted to the manufacturing concerns and dealers who have participated in this exhibit. It was remarkable not only for its beauty of arrangement but for the interest, both educational and commercial, which the exhibitors displayed in their contacts with hospital people in attendance at the convention. The members of the Association, as well as all other hospital people, should give their patronage to these firms. The quality of the goods they manufacture and sell is the best that the market affords. Their prices are the most reasonable. Their business contacts are the most agreeable.

The exhibitors deserve the patronage of all hospital people, not only during convention week but throughout the year.

CLASSIFIED LIST OF EXHIBITORS

BUILDING MATERIALS

Acoustical Treatment
Celotex Co., The ..... Chicago, Ill.
Johns-Manville Corp. ..... New York, N. Y.

Allegheny Metal
Allegheny Steel Co. ..... Brackenridge, Pa.

Asbestos Products
Johns-Manville Corp. ..... New York, N. Y.

Cove Bases, Rubber
Canadian J. H. Stedman-made Rubber Flooring ..... Montreal, P. Q., Can.
Stedman Rubber Flooring Co. ..... South Braintree, Mass.

Cubicle Partitions, Glass and Metal
Sanymetal Products Co. ..... Cleveland, Ohio

Fire Escapes, Tubular
Corporate Steel Products Ltd. ..... Montreal, P. Q., Can.

Flooring
Canadian J. H. Stedman-made Rubber Flooring ..... Montreal, P. Q., Can.
Johns-Manville Corp. ..... New York, N. Y.
National Terrazzo and Mosaic Assn. ..... Milwaukee, Wis.
Stedman Rubber Flooring Co. ..... South Braintree, Mass.
Tile and Mantel Contractors' Assn. of Amer. ..... Washington, D. C.

Insulation
Celotex Co., The ..... Chicago, Ill.
Johns-Manville Corp. ..... New York, N. Y.

Monel Metal for Fabrication
International Nickel Co., Inc., The ..... New York, N. Y.

Mosaic Materials
National Terrazzo and Mosaic Assn. ..... Milwaukee, Wis.

Pipes, Acid-proof
Duriron Co., Inc., Inc., The.....Dayton, Ohio

Ray-proof Rubber
Stedman Rubber Flooring Co.....South Braintree, Mass.

Sinks, Acid-proof
Duriron Co., Inc., The.....Dayton, Ohio

Sound-proofing Materials
Celotex Co., The.....Chicago, Ill.
Johns-Manville Corp. .....New York, N. Y.

Stair Treads, Rubber
Canadian J. H. Stedman-made Rubber Flooring.....Montreal, P. Q., Can.
Stedman Rubber Flooring Co.....South Braintree, Mass.

Terrazzo Materials
National Terrazzo and Mosaic Assn.....Milwaukee, Wis.

Tile, Floor and Wall
Tile and Mantel Contractors' Assn. of Amer.....Washington, D. C.

Tile, Mosaic and Terrazzo
National Terrazzo and Mosaic Assn.....Milwaukee, Wis.

Tile, Rubber
Canadian J. H. Stedman-made Rubber Flooring.....Montreal, P. Q., Can.
Stedman Rubber Flooring Co.....South Braintree, Mass.

Thresholds, Rubber
Canadian J. H. Stedman-made Rubber Flooring.....Montreal, P. Q., Can.
Stedman Rubber Flooring Co.....South Braintree, Mass.

Wainscoting
Canadian J. H. Stedman-made Rubber Flooring.....Montreal, P. Q., Can.
Johns-Manville Corp. .....New York, N. Y.
Stedman Rubber Flooring Co.....South Braintree, Mass.

Window Equipment, Reversible
Williams Pivot Sash Co.....Cleveland, Ohio

Window Screens
Rolscreen Co. .....Pella, Iowa
Standard Tube Co., Ltd.....Woodstock, Ont., Can.

Windows, Steel
Detroit Steel Products Co.....Detroit, Mich.
Richey, Browne, and Donald, Inc.....Maspeth, N. Y.

MECHANICAL EQUIPMENT

Amplifiers
Centralized Control Corp.....Chicago, Ill.

Annunciators
Centralized Control Corp.....Chicago, Ill.
Connecticut Telephone and Electric Corp.....Meriden, Conn.
Dictograph Products Co., Inc.....New York, N. Y.
Holtzer-Cabot Electric Co., The.....Boston, Mass.
Standard Electric Time Co.....Springfield, Mass.

Call Systems, Telescreen
News Projection Corp.....New York, N. Y.

Clock Systems, Electric
Connecticut Telephone and Electric Corp.....Meriden, Conn.
Standard Electric Time Co.....Springfield, Mass.

Filtering Equipment
Permutit Co., The.....New York, N. Y.

Fire Alarm Systems
Connecticut Telephone and Electric Corp.....Meriden, Conn.
Holtzer-Cabot Electric Co., The.....Boston, Mass.

Plumbing Equipment
Crane Co. .....Chicago, Ill.
Leonard-Rooke Co.....Providence, R. I.
Standard Sanitary Mfg. Co.....Pittsburgh, Pa.

Recorder, CO_2
Permutit Co., The.....New York, N. Y.

Signaling Equipment, Complete Line
Centralized Control Corp. ..... Chicago, Ill.
Connecticut Telephone and Electric Corp. ..... Meriden, Conn.
Dictograph Products Co., Inc. ..... New York, N. Y.
Holtzer-Cabot Electric Co., The ..... Boston, Mass.
Standard Electric Time Co. ..... Springfield, Mass.

Switchboards
Connecticut Telephone and Electric Corp. ..... Meriden, Conn.

Telephones, Intercommunicating
Centralized Control Corp. ..... Chicago, Ill.
Connecticut Telephone and Electric Corp. ..... Meriden, Conn.
Dictograph Products Co., Inc. ..... New York, N. Y.
Holtzer-Cabot Electric Co., The ..... Boston, Mass.
Standard Electric Time Co. ..... Springfield, Mass.

Valves, Thermostatic Water Mixing
Leonard-Rooke Co. ..... Providence, R. I.

Water Softening Equipment
Permutit Co., The ..... New York, N. Y.

GENERAL FURNISHINGS AND SUPPLIES

Apparel, Nurses'
Altro Work Shops, Inc. ..... New York, N. Y.
Corbett-Cowley Co., Ltd. ..... Toronto, Ont., Can.
Eaton Co., Ltd., T. ..... Toronto, Ont., Can.
Marvin Co., E. W. ..... Troy, N. Y.
Neitzel Mfg. Co., Inc. ..... Waterford, N. Y.
Nestel's Equipment Co. ..... New York, N. Y.
Simpson Co., Ltd., Robert ..... Toronto, Ont, Can.
Williams & Co., C. D. ..... Philadelphia, Pa.

Baskets, Fibre
Hospital Import Corp. ..... New York, N. Y.

Bassinets
Englander Spring Bed Co. ..... New York, N. Y.
Schoedinger, F. O. ..... Columbus, Ohio

Beds
Doehler Furniture Co., Inc. ..... New York, N. Y.
Dougherty & Co., H. D. ..... Philadelphia, Pa.
Eaton Co., Ltd., T. ..... Toronto, Ont., Can.
Englander Spring Bed Co. ..... New York, N. Y.
Greenpoint Metallic Bed Co. ..... Brooklyn, N. Y.
Hard Mfg. Co. ..... Buffalo, N. Y.
Hall & Sons, Frank A. ..... New York, N. Y.
Herbst Corp., L. B. ..... Chicago, Ill.
Hill-Rom Co., The ..... Batesville, Ind.
Metal Craft, Ltd. ..... Grimsby, Ont., Can.
Simmons Co., The ..... Chicago, Ill.
Simson Co., Ltd., Robert ..... Toronto, Ont., Can.
Standard Tube Co., Ltd. ..... Woodstock, Ont., Can.
Stickley Bros. Co. ..... Grand Rapids, Mich.

Bedside Unit
Hospital Import Corp. ..... New York, N. Y.

Blankets
Clark Linen Co. ..... Chicago, Ill.
Dougherty & Co., H. D. ..... Philadelphia, Pa.
Eaton & Co., Ltd., T. ..... Toronto, Ont., Can.
Herbst Corp., L. B. ..... Chicago, Ill.
Rhoads & Co. ..... Philadelphia, Pa.
Ross, Inc., Will ..... Milwaukee, Wis.
Simpson Co., Ltd., Robert ..... Toronto, Ont., Can.
Textile Products Co., Ltd. ..... Toronto, Ont., Can.

Bumpers
Faultless Caster Co. ..... Evansville, Ind.
Colson Co., The ..... Elyria, Ohio
Stedman Rubber Flooring Co. ..... South Braintree, Mass.

Casters, Complete Line
Colson Co., The ..... Elyria, Ohio
Darnell Corp., Ltd. ..... Long Beach, Calif.
Faultless Caster Co. ..... Evansville, Ind.
Jarvis & Jarvis, Inc. ..... Palmer, Mass.

Chair Rails, Rubber
Stedman Rubber Flooring Co.....South Braintree, Mass.

Chairs, Solarium
Englander Spring Bed Co.....New York, N. Y.

Children's Sets, Decorated
Hospital Import Corp.....New York, N. Y.

Cleaning Equipment
Hygiene Products, Ltd.....Toronto, Ont., Can.

Cleaning Supplies, General
Ford Sales Co., The J. B.....Wyandotte, Mich.
Hygiene Products, Ltd.....Toronto, Ont., Can.
Midland Chemical Laboratories, Inc.....Dubuque, Iowa
Ross, Inc., Will.....Milwaukee, Wis.

Cleansing Agents
Ford Sales Co., The J. B.....Wyandotte, Mich.
Hygiene Products, Ltd.....Toronto, Ont., Can.
Procter & Gamble Co., The.....Cincinnati, Ohio

Coolers, Water
Wood & Co., Ltd., G. H.....Toronto, Ont., Can.

Cubicle Curtain Equipment
Judd Co., Inc., H. L.....New York, N. Y.

Curtains
Herbst Corp., L. B.....Chicago, Ill.

Cushions, Bed
K & W Rubber Co., The.....Delaware, Ohio
Karr Co., Charles.....Holland, Mich.

Detergents
Ford Sales Co., The J. B.....Wyandotte, Mich.

Diapers, Sanitary
Griswoldville Mfg. Co.....New York, N. Y.

Disinfectants, Deodorizers
Huntington Laboratories, Inc.....Huntington, Ind.
Hygiene Products, Ltd.....Toronto, Ont., Can.
Wood & Co., Ltd., G. H.....Toronto, Ont., Can.
Vestal Chemical Laboratories, Inc.....St. Louis, Mo.

Dispensers, Soap
Huntington Laboratories, Inc.....Huntington, Ind.
Midland Chemical Laboratories, Inc.....Dubuque, Iowa
Proctor & Gamble Co., The.....Cincinnati, Ohio
Vestal Chemical Laboratories, Inc.....St. Louis, Mo.
Wood & Co., Ltd., G. H.....Toronto, Ont., Can.

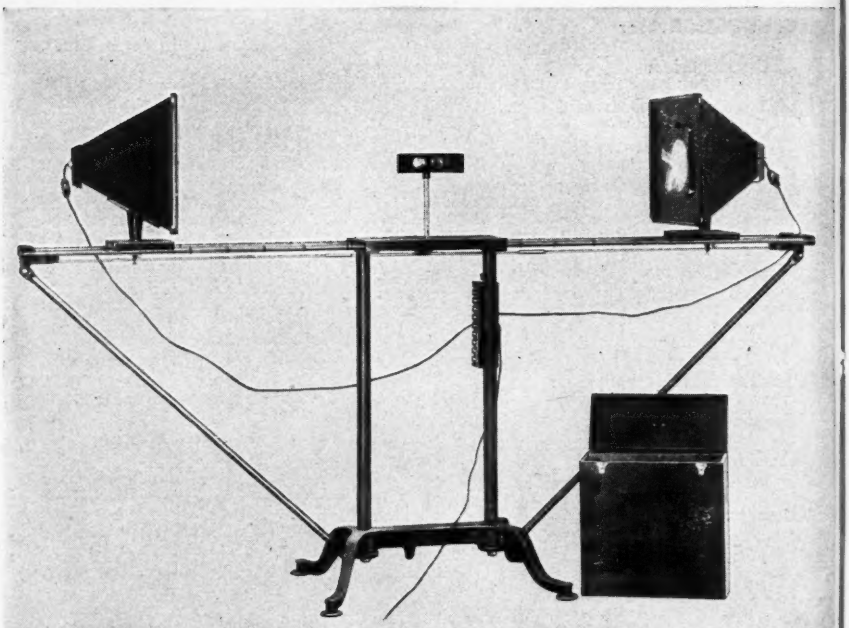
Drapery Fabrics
Herbst Corp., L. B.....Chicago, Ill.

Duplicating Machines
Beck Duplicator Co., The.....New York, N. Y.

Floor Scrubbing, Waxing, and Polishing Machines
Continental Car-Na-Var Corp.....Brazil, Ind.
Huntington Laboratories, Inc.....Huntington, Ind.
Kent Co., Inc., The.....Rome, N. Y.
Midland Chemical Laboratories, Inc.....Dubuque, Iowa
Wood & Co., Ltd., G. H.....Toronto, Ont., Can.

Floor Treatment Compounds
Continental Car-Na-Var-Corp.....Brazil, Ind.
Vestal Chemical Laboratories, Inc.....St. Louis, Mo.
Wood & Co., Ltd., G. H.....Toronto, Ont., Can.

Furniture, Complete Line
Doehler Furniture Co., Inc.....New York, N. Y.
Dougherty & Co., H. D.....Philadelphia, Pa.
Eaton Co., Ltd., T.....Toronto, Ont., Can.
Hard Mfg. Co.....Buffalo, N. Y.
Hill-Rom Co., The.....Batesville, Ind.
Herbst Corp., L. B.....Chicago, Ill.
Metal Craft, Ltd.....Grimsby, Ont., Can.
Simmons Co., The.....Chicago, Ill.
Simpson Co., Ltd., Robert.....Toronto, Ont., Can.
Standard Tube Co., Ltd.....Woodstock, Ont., Can.
Stickley Bros. Co.....Grand Rapids, Mich.



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THE new X-Ray Stereoscope, developed by Bausch & Lomb, has improvements which are making possible a more extended use of this very valuable technique than was ever hoped before. Roentgenologists will recognize in the following partial list of features an elimination of practically all of the faults commonly found in these instruments:

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In this new instrument the plasticity, or "third dimension" in relation to the other two dimensions, is absolutely accurate. Thus a chest 7 or 8 inches deep actually appears that depth. Hence foreign bodies or pathological conditions can be located with precision.

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Stedman Rubber Flooring Co.....South Braintree, Mass.

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Gowns, Complete Line
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Corbett-Cowley Co., Ltd.....Toronto, Ont., Can.
Dix & Sons Corp., Henry A.....New York, N. Y.
Eaton Co., Ltd., T.....Toronto, Ont., Can.
Marvin Co., E. W.....Troy, N. Y.
Neitzel Mfg. Co., Inc.....Waterford, N. Y.
Nestel's Equipment Co.....New York, N. Y.
Rhoads & Co.....Philadelphia, Pa.
Ross, Inc., Will.....Milwaukee, Wis.
Simpson Co., Ltd., Robert.....Toronto, Ont., Can.
Williams & Co., C. D.....Philadelphia, Pa.

Insecticides
Hygiene Products, Ltd.....Toronto, Ont., Can.
Vestal Chemical Laboratories, Inc.....St. Louis, Mo.
Wood & Co., Ltd., G. H.....Toronto, Ont., Can.

Lamps, Bed
Colson Co., The.....Elyria, Ohio
Eaton Co., Ltd., T.....Toronto, Ont., Can.

Marking Labels
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Mattresses
Dougherty & Co., H. D.....Philadelphia, Pa.
Eaton Co., Ltd., T.....Toronto, Ont., Can.
Englander Spring Bed Co.....New York, N. Y.
Hall & Sons, Frank A.....New York, N. Y.
Herbst Corp., L. B.....Chicago, Ill.
K & W Rubber Co., The.....Delaware, Ohio
Karr Co., Charles.....Holland, Mich.
Restonair, Inc.....New York, N. Y.
Simmons Co., The.....Chicago, Ill.
Simpson Co., Ltd., Robert.....Toronto, Ont., Can.
Stickley Bros. Co.....Grand Rapids, Mich.

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Finnell System, Inc.....Elkhart, Ind.

Nurses' Uniforms
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Corbett-Cowley Co., Ltd.....Toronto, Ont., Can.
Dix & Sons Corp., Henry A.....New York, N. Y.
Eaton Co., Ltd., T.....Toronto, Ont., Can.
Marvin Co., E. W.....Troy, N. Y.
Neitzel Mfg. Co., Inc.....Waterford, N. Y.
Nestel's Equipment Co.....New York, N. Y.
Ross, Inc., Will.....Milwaukee, Wis.
Simpson Co., Ltd., Robert.....Toronto, Ont., Can.
Williams & Co., C. D.....Philadelphia, Pa.

Pail Silencers
Kaufmann & Co., Henry L.....Boston, Mass.
Orrsell Co., Inc., The.....New York, N. Y.

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National Lead Co.....New York, N. Y.
Sherwin-Williams Co.....Cleveland, Ohio

Paper Goods
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Ross, Inc., Will.....Milwaukee, Wis.
Wood & Co., Ltd., G. H.....Toronto, Ont., Can.

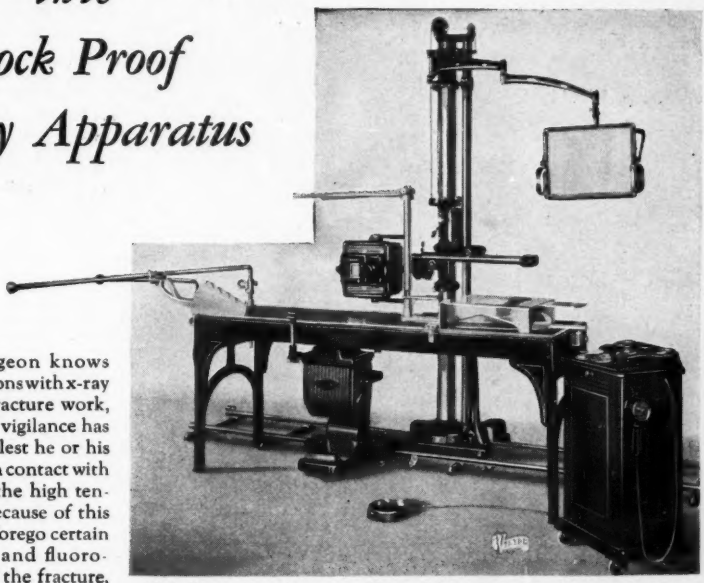
Pillows
Dougherty & Co., H. D.....Philadelphia, Pa.
Eaton Co., Ltd., T.....Toronto, Ont., Can.
Hall & Sons, Frank A.....New York, N. Y.
Herbst Corp., L. B.....Chicago, Ill.
Simpson Co., Ltd., Robert.....Toronto, Ont., Can.

Pitchers, Individual Ice
Hospital Import Corp.....New York, N. Y.

Radiator Covers
Standard Tube Co., Ltd.....Woodstock, Ont., Can.

A Boon to Fracture Work

—*this Shock Proof X-Ray Apparatus*



This illustration shows the Victor Model B-26 Shock-Proof X-Ray Unit in position for bi-plane fluoroscopy, with two tube heads, for directing the x-rays from below and crosswise the table, respectively. Note how the McCutchen Fracture Device is adapted to the table. The fluoroscopic screen (at upper right in picture) is swung down into position for observation in either plane; through the two-way foot switch on the floor the operator energizes either tube head at will.

EVERY surgeon knows the limitations with x-ray apparatus in fracture work, when constant vigilance has been necessary lest he or his patient come in contact with some part of the high tension circuit. Because of this he has had to forego certain radiographic and fluoroscopic views of the fracture, regardless of their importance to diagnosis and prognosis.

That day is past, however, since the advent of Victor Shock-Proof X-Ray Apparatus. Think of the advantage of being able to view any part of the body, from every conceivable angle, without regard to the proximity of the high tension circuit to the operator, or his assistant, or the patient—without any danger whatsoever of electrical shock.

By placing the Coolidge x-ray tube and the x-ray transformer in a grounded and sealed container filled with insulating oil, a shock-proof and fool-proof x-ray apparatus is realized. This feature of safety has not been at the sacrifice of flexibility; to the contrary, it has made the Victor unit capable of viewing the various regions of the body in positions and from angles which heretofore have been impossible, due to attendant dangers of the high tension circuit. Furthermore, the complete insulation of the high tension circuit in Victor shock-proof apparatus makes it the safest to use in the presence of ether vapor.

Consider how the handling of some cases will be facilitated, when a fracture may be viewed fluoroscopically in two planes, without having to change the position of the patient. This is accomplished with one shock-proof tube head below the table, another at the side directing the rays crosswise the table. A two-way switch energizes the two tube heads alternately, while the suspended fluoroscopic screen is quickly adjusted to either plane during observation.

With a fracture-setting device adapted to the table, Victor shock-proof equipment is truly the last word in x-ray facilities for the fracture specialist.

To fully appreciate the significance of this development, you should read the complete descriptive literature, which we will gladly send on request.

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Rhoads & Co.....Philadelphia, Pa.

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Schoedinger, F. O.....Columbus, Ohio

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Huntington Laboratories, Inc.....Huntington, Ind.
Vestal Chemical Laboratories, Inc.....St. Louis, Mo.
Wood & Co., Ltd., G. H.....Toronto, Ont., Can.

Soap, Scrubbing Compounds
Huntington Laboratories, Inc.....Huntington, Ind.
Procter & Gamble Co., The.....Cincinnati, Ohio
Vestal Chemical Laboratories, Inc.....St. Louis, Mo.

Soaps
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Huntington Laboratories, Inc.....Huntington, Ind.
Hygiene Products, Ltd.....Toronto, Ont., Can.
Midland Chemical Laboratories, Inc.....Dubuque, Iowa
Procter & Gamble Co., The.....Cincinnati, Ohio
Vestal Chemical Laboratories, Inc.....St. Louis, Mo.

Springs
Englander Spring Bed Co.....New York, N. Y.
Greenpoint Metallic Bed Co.....Brooklyn, N. Y.
Hall & Sons, Frank A.....New York, N. Y.
Simmons Co., The.....Chicago, Ill.
Stickley Bros. Co.....Grand Rapids, Mich.

Tables, Bedside
Colson Co., The.....Elyria, Ohio
Eaton Co., Ltd., T.....Toronto, Ont., Can.
Schoedinger, F. O.....Columbus, Ohio
Simpson Co., Ltd., Robert.....Toronto, Ont., Can.

Tables, Overbed
Englander Spring Bed Co.....New York, N. Y.
Simmons Co., The.....Chicago, Ill.

Tables, Solarium
Englander Spring Bed Co.....New York, N. Y.

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Clark Linen Co.....Chicago, Ill.
Dwight Mfg. Co.....New York, N. Y.
Eaton Co., Ltd., T.....Toronto, Ont., Can.
Herbst Corp., L. B.....Chicago, Ill.
Hygiene Products, Ltd.....Toronto, Ont., Can.
Nestel's Equipment Co.....New York, N. Y.
Rhoads & Co.....Philadelphia, Pa.
Ross, Inc., Will.....Milwaukee, Wis.
Simpson Co., Ltd., Robert.....Toronto, Ont., Can.
Textile Products Co., Ltd.....Toronto, Ont., Can.

Towel Vendors
Wood & Co., Ltd., G. H.....Toronto, Ont., Can.

Towels, Electric (Air Dryers)
Wood & Co., Ltd., G. H.....Toronto, Ont., Can.

Trays, Overbed
Schoedinger, F. O.....Columbus, Ohio

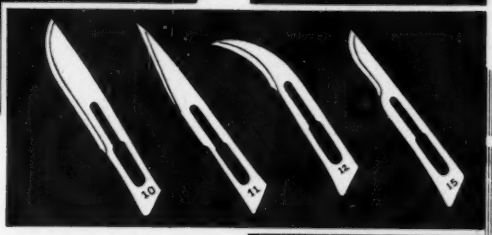
Trucks, Service
Colson Co., The.....Elyria, Ohio
Jarvis & Jarvis, Inc.....Palmer, Mass.

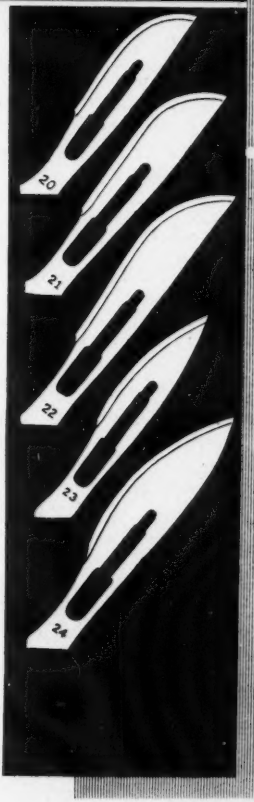
Vacuum Cleaners
Kent Co., Inc., The.....Rome, N. Y.

Vases
Hospital Import Corp.....New York, N. Y.
Stedman Rubber Flooring Co.....South Braintree, Mass.

Waste Receptacles
Tidy Products, Inc.....New York, N. Y.
Wood & Co., Ltd., G. H.....Toronto, Ont., Can.

It's Sharp





Dissatisfaction with resharpened scalpels was responsible for the introduction of the detachable blade knife. With nine patterns of razor sharp blades, the Bard-Parker Knife has solved the resharpening problem for many physicians and surgeons. A used blade may be instantly replaced with a new keen blade at half the average cost of resharpening the old time scalpel.

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Hartz Co., Ltd., J. F ..... Toronto, Ont., Can.

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Cheney Chemicals, Ltd ..... Toronto, Ont., Can.
Puritan Compressed Gas Corp ..... Kansas City, Mo.
Squibb & Sons, E. R ..... New York, N. Y.

Anesthetizing Apparatus
Foregger Co., Inc., The ..... New York, N. Y.
Heidbrink Co. ..... Minneapolis, Minn.
McKesson Appliance Co ..... Toledo, Ohio
Puritan Compressed Gas Corp ..... Kansas City, Mo.
Safety Anaesthesia Apparatus Concern ..... Chicago, Ill.
Sorensen Co., C. M ..... Long Island City, N. Y.

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Johnson & Johnson, Inc ..... New Brunswick, N. J.
Lewis Mfg. Co ..... Walpole, Mass.
Norvic Co. ..... Boston, Mass.

Bandage Machine, Felt and Plaster
Jamison Semple Co ..... New York, N. Y.

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Beds, Fracture
De Puy Mfg. Co ..... Warsaw, Ind.
Siebrandt Mfg. Co., J. R ..... Kansas City, Mo.
Zimmer Mfg. Co ..... Warsaw, Ind.

Biological Products
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Books, Medical and Nursing
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Lippincott Co., J. B ..... Philadelphia, Pa.
MacMillan Co., The ..... New York, N. Y.
Saunders Co., W. B ..... Philadelphia, Pa.

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Medical Specialties Mfg. Co ..... New York, N. Y.

Cabinets, Splint
De Puy Mfg. Co ..... Warsaw, Ind.

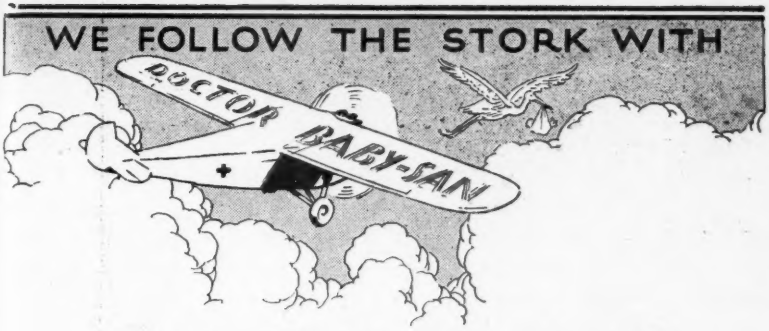
Caps, Operating Room
Corbett-Cowley Co., Ltd ..... Toronto, Ont., Can.
Dix & Sons Corp., Henry A ..... New York, N. Y.
Johnson & Johnson, Inc ..... New Brunswick, N. J.
Marvin Co., E. W ..... Troy, N. Y.
Neitzel Mfg. Co., Inc ..... Waterford, N. Y.
Ross, Inc., Will ..... Milwaukee, Wis.
Williams & Co., C. D ..... Philadelphia, Pa.

Chemicals
Squibb & Sons, E. R ..... New York, N. Y.

Clinical Apparatus, Stainless Steel
Republic Steel Corp ..... Massillon, Ohio

Compressors
Ritter Dental Mfg. Co., Inc ..... Rochester, N. Y.

Cotton and Cotton Substitutes
Griswoldville Mfg. Co ..... New York, N. Y.
Johnson & Johnson, Inc ..... New Brunswick, N. J.
Lewis Mfg. Co ..... Walpole, Mass.
Ross, Inc., Will ..... Milwaukee, Wis.



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AMERICA'S FAVORITE BABY SOAP

IT IS AGREED at Round Table discussions of Hospital Superintendents, nurses and medical men *that* **BABY-SAN** *is the correct product for bathing babies.*

BECAUSE—bathing the baby *immediately after birth with* **BABY-SAN** removes the vernix *quickly and gently.*

BECAUSE—BABY-SAN *eliminates from the skin* of the new born possible existing bacteria, which if allowed to remain, would develop into a troublesome situation.

BECAUSE—daily bathing with **BABY-SAN** *keeps* the baby's skin in a wholesome condition.

BABY-SAN *portable dispensers for use on nursery bathing tables are furnished to the hospitals. They're handy and efficient.*

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Hospital **Department**

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K & W Rubber Co., The ..... Delaware, Ohio

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Ritter Dental Mfg. Co., Inc ..... Rochester, N. Y.

Desks, Chart
Metal Craft, Ltd ..... Grimsby, Ont., Can.
Scanlan-Morris Co ..... Madison, Wis.
Schoedinger, F. O ..... Columbus, Ohio

Diathermy Apparatus
Medical Specialties Mfg. Co ..... New York, N. Y.

Dispensers, Hand Scrub
Meinecke & Co ..... New York, N. Y.

Dressings, Surgical
Eaton Co., Ltd., T ..... Toronto, Ont., Can.
Griswoldville Mfg. Co ..... New York, N. Y.
Herbst Corp., L. B ..... Chicago, Ill.
Lewis Mfg. Co ..... Walpole, Mass.
Ross, Inc., Will ..... Milwaukee, Wis.
Simpson Co., Ltd., Robert ..... Toronto, Ont., Can.

Dressing Baskets
American Hospital Supply Corp ..... Chicago, Ill.

Enamelware
Fengel Corp., The ..... New York, N. Y.
Hospital Import Corp ..... New York, N. Y.
Meinecke & Co ..... New York, N. Y.
Ross, Inc., Will ..... Milwaukee, Wis.
Stevens Companies, The ..... Toronto, Ont., Can.
Thorner Brothers ..... New York, N. Y.

Fever Producing Machinery
Medical Specialties Mfg. Co ..... New York, N. Y.

Forms, Record
Hospital Standard Publishing Co ..... Baltimore, Md.
Physicians' Record Co ..... Chicago, Ill.

Fracture Appliances
De Puy Mfg. Co ..... Warsaw, Ind.
Siebrandt Mfg. Co., J. R ..... Kansas City, Mo.
Zimmer Mfg. Co ..... Warsaw, Ind.

Furniture, Scientific
Kny-Scheerer Corp., The ..... New York, N. Y.
Scanlan-Morris Co ..... Madison, Wis.
Schoedinger, F. O ..... Columbus, Ohio

Gauze
Griswoldville Mfg. Co ..... New York, N. Y.
Johnson & Johnson, Inc ..... New Brunswick, N. J.
Lewis Mfg. Co ..... Walpole, Mass.

Glassware, Laboratory
Fengel Corp., The ..... New York, N. Y.
Glasco Products Co ..... Chicago, Ill.

Gowns, Surgical
Altro Work Shops, Inc ..... New York, N. Y.
Corbett-Cowley Co., Ltd ..... Toronto, Ont., Can.
Dix & Sons Corp., Henry A ..... New York, N. Y.
Eaton Co., Ltd., T ..... Toronto, Ont., Can.
Marvin Co., E. W ..... Troy, N. Y.
Neitzel Mfg. Co., Inc ..... Waterford, N. Y.
Ross, Inc., Will ..... Milwaukee, Wis.
Simpson Co., Ltd., Robert ..... Toronto, Ont., Can.
Williams & Co., C. D ..... Philadelphia, Pa.

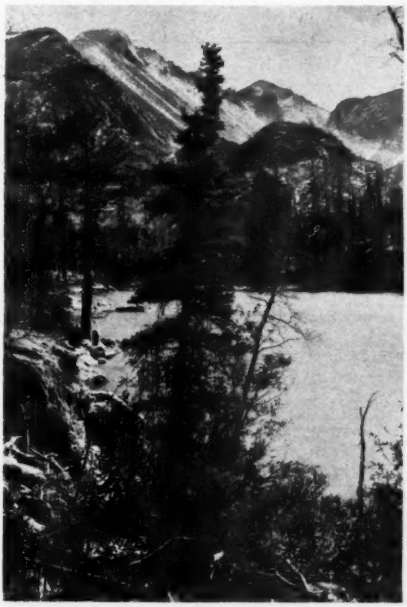
Hydrotherapeutic Apparatus
Crane Co. ..... Chicago, Ill.
Standard Sanitary Mfg. Co ..... Pittsburgh, Pa.

IN DENVER . . .

MORE THAN 75 PER CENT OF DENVER'S SURGICAL BEDS ARE LOCATED IN HOSPITALS IN WHICH AMERICAN STERILIZERS ARE IN USE

. . AMERICAN sterilizers throughout Colorado, Wyoming, and Utah are serviced promptly and efficiently from the offices of the Denver Fire Clay Company in Denver, and Salt Lake City, by men thoroughly well equipped technically, to advise on the principles of sterilization, as well as to care for mechanical details.

MORE THAN 60 PER CENT OF AMERICA'S FINE HOSPITALS INCLUDE AMERICAN STERILIZERS WITH THEIR SURGICAL EQUIPMENT



These prominent hospitals in Denver are all extensive users of American sterilizers . . . .

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UNIVERSITY OF COLORADO SCHOOL OF MEDICINE

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CANADIAN AGENTS: Ingram & Bell, Ltd., Toronto, Montreal, Winnipeg, Calgary

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Becton, Dickinson & Co. ..... Rutherford, N. J.
Doniger & Co., Inc., S. ..... New York, N. Y.
Faichney Instrument Corp ..... Watertown, N. Y.
Fengel Corp., The ..... New York, N. Y.

Hypodermic Trays
American Hospital Supply Corp ..... Chicago, Ill.

Identification Labels (for Rubber Goods)
Orrsell Co., Inc., The ..... New York, N. Y.

Identification Necklaces
Deknatel & Son, J. A ..... Long Island City, N. Y.

Identification of Infants, System for
Dougherty & Co., H. D ..... Philadelphia, Pa.

Incubators
Scanlan-Morris Co. ..... Madison, Wis.

Inhalators
Colson Co., The ..... Elyria, Ohio

Instruments, Endoscopic
Zeiss, Inc., Carl ..... New York, N. Y.

Instruments, Surgical
American Hospital Supply Corp ..... Chicago, Ill.
Bard-Parker Co., Inc ..... New York, N. Y.
Doniger & Co., Inc., S. ..... New York, N. Y.
Eaton Co., Ltd., T. ..... Toronto, Ont., Can.
Faichney Instrument Corp ..... Watertown, N. Y.
Fengel Corp., The ..... New York, N. Y.
Hospital Import Corp ..... New York, N. Y.
Simpson Co., Ltd., Robert ..... Toronto, Ont., Can.
Stevens Companies, The ..... Toronto, Ont., Can.
Stille-Scanlan Co ..... New York, N. Y.
Taylor Instrument Companies ..... Rochester, N. Y.

Insulin
Squibb & Sons, E. R ..... New York, N. Y.

Invalid Chairs
Colson Co., The ..... Elyria, Ohio

Irrigators, Vacuum
Hospital Import Corp ..... New York, N. Y.

Knives, Electro
Medical Specialties Mfg. Co ..... New York, N. Y.

Knives, Operating
Bard-Parker Co., Inc ..... New York, N. Y.

Lamps, Operating Room
American Surgical Lamp Co., Ltd ..... Long Beach, Calif.
Medical Specialties Mfg. Co ..... New York, N. Y.
Ritter Dental Mfg. Co., Inc ..... Rochester, N. Y.
Scialytic Corp. of Amer ..... Philadelphia, Pa.
Zeiss, Inc., Carl ..... New York, N. Y.

Lamps, Therapeutic
American Surgical Lamp Co., Ltd ..... Long Beach, Calif.
Britesun, Inc. ..... Chicago, Ill.

Lights, Emergency
Scialytic Corp. of Amer ..... Philadelphia, Pa.

Manifolds, Oxygen
Linde Air Products Co ..... New York, N. Y.

Manometers
Becton, Dickinson & Co ..... Rutherford, N. J.

Masks, Nose and Mouth
Johnson & Johnson, Inc ..... New Brunswick, N. J.

Medicine Trays
American Hospital Supply Corp ..... Chicago, Ill.

Metabolism Apparatus
Collins, Inc., Warren E. ..... Boston, Mass.
McKesson Appliance Co ..... Toledo, Ohio

Microscopes and Accessories
Zeiss, Inc., Carl ..... New York, N. Y.

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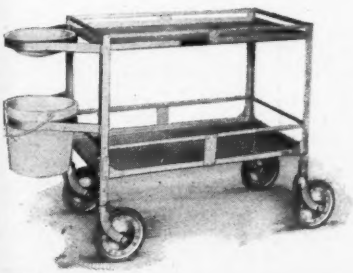

If you are attending the American Hospital Association Convention at Toronto, be sure and see the display of Colson equipment at Booths 35, 37, 136 and 138. There will be many new and interesting models shown.

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Branches in Principal Cities

Monel Metal for Fabrication
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Ritter Dental Mfg. Co., Inc ..... Rochester, N. Y.

Orthopedic Specialties
Jamison Semple Co ..... New York, N. Y.

Oxygen
Linde Air Products Co ..... New York, N. Y.
Puritan Compressed Gas Corp ..... Kansas City, Mo.

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American Hospital Supply Corp ..... Chicago, Ill.
Collins, Inc., Warren E ..... Boston, Mass.
Emerson, J. H ..... Cambridge, Mass.
Foregger Co., Inc., The ..... New York, N. Y.
McKesson Appliance Co ..... Toledo, Ohio
Oxygen Therapy Service, Inc ..... New York, N. Y.
Puritan Compressed Gas Corp ..... Kansas City, Mo.

Pads, Operating Table
K & W Rubber Co., The ..... Delaware, Ohio
Karr Co., Charles ..... Holland, Mich.
Kaufmann & Co., Henry L ..... Boston, Mass.

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BiSoDol Co., Inc., The ..... New Haven, Conn.
Health Products Corp ..... Newark, N. J.
Petrolagar Laboratories, Inc ..... Chicago, Ill.
Squibb & Sons, E. R ..... New York, N. Y.

Photographic Equipment, Supplies, Etc.
Eastman Kodak Co ..... Rochester, N. Y.

Physiotherapy Equipment
General Electric X-ray Corp ..... Chicago, Ill.
Kelley-Koett Mfg. Co., Inc., The ..... Covington, Ky.
Westinghouse X-ray Co ..... Long Island City, N. Y.

Pumps, Surgical
McKesson Appliance Co ..... Toledo, Ohio

Racks, Chart
Schoedinger, F. O ..... Columbus, Ohio

Regulators, Oxygen
Linde Air Products Co ..... New York, N. Y.

Respirators
Collins, Inc., Warren E ..... Boston, Mass.
Emerson, J. H ..... Cambridge, Mass.

Resuscitation Apparatus
Collins, Inc., Warren E ..... Boston, Mass.
Emerson, J. H ..... Cambridge, Mass.
Foregger Co., Inc., The ..... New York, N. Y.
Puritan Compressed Gas Corp ..... Kansas City, Mo.

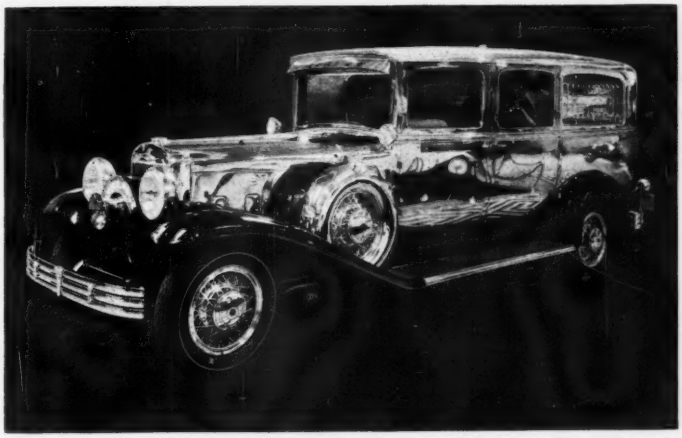
Rubber Gloves
Hankins Rubber Co ..... Massillon, Ohio
Massillon Rubber Co., The ..... Massillon, Ohio
Wilson Rubber Co ..... Canton, Ohio

Rubber Goods
American Hospital Supply Corp ..... Chicago, Ill.
Fengel Corp., The ..... New York, N. Y.
Hankins Rubber Co ..... Massillon, Ohio
K & W Rubber Co., The ..... Delaware, Ohio
Kaufmann & Co., Henry L ..... Boston, Mass.
Massillon Rubber Co., The ..... Massillon, Ohio
Meinecke & Co ..... New York, N. Y.
Ross, Inc., Will ..... Milwaukee, Wis.
Stevens Companies, The ..... Toronto, Ont., Can.
Thorner Brothers ..... New York, N. Y.
Wilson Rubber Co ..... Canton, Ohio

Rubber Sheeting
American Hospital Supply Corp ..... Chicago, Ill.
Kaufmann & Co., Henry L ..... Boston, Mass.

Sheets, Operating
Corbett-Cowley Co., Ltd ..... Toronto, Ont., Can.

Slides, Stereopticon and Miscroscopic
Denoyer-Geppert Co ..... Chicago, Ill.



HENNEY AMBULANCES

Are Specially Built to Meet the Needs of Individual Institutions

Modern Henney Ambulances are the result of 63 years of experience in designing and building vehicles for special uses.

Everything from a new type, polished metal ambulance body (as shown above) to a folding lavatory with hot and cold running water has been built into Henney Ambulances — to make them more convenient and serviceable for the institutions using them.

The New Henney Ambulances retain all of the stamina, speed, power, durability and easy riding qualities that have made them the choice of many of the country's prominent hospitals, institutions, industrial concerns, city and state health and police departments and departments of the national government.

If your institution requires an ambulance completely appointed for unusually long trip comfort, and attractive equipment for advertising purposes we can provide exactly what you wish.

A Henney Ambulance is a sure means of advancing the community's good will toward the institution using it.

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Freeport, Illinois

Soap, Surgical
Huntington Laboratories, Inc. ..... Huntington, Ind.
Hygiene Products, Ltd. ..... Toronto, Ont., Can.
Johnson & Johnson, Inc. ..... New Brunswick, N. J.
Vestal Chemical Laboratories, Inc. ..... St. Louis, Mo.

Splints
De Puy Mfg. Co. ..... Warsaw, Ind.
Siebrandt Mfg. Co., J. R. ..... Kansas City, Mo.
Zimmer Mfg. Co. ..... Warsaw, Ind.

Spotlights, Portable and Emergency
American Surgical Lamp Co., Ltd. ..... Long Beach, Calif.

Sterilizers
American Sterilizer Co. ..... Erie, Pa.
Bard-Parker Co., Inc. ..... New York, N. Y.
Castle Co., Wilmot ..... Rochester, N. Y.
Hartz Co., Ltd., J. F. ..... Toronto, Ont., Can.
Kny-Scheerer Corp. ..... New York, N. Y.
Ritter Dental Mfg. Co., Inc. ..... Rochester, N. Y.
Scanlan-Morris Co. ..... Madison, Wis.

Stretchers, Wheel
Colson Co., The ..... Elyria, Ohio
Schoedinger, F. O. ..... Columbus, Ohio

Suction Apparatus
Sorensen Co., C. M. ..... Long Island City, N. Y.

Suits, Surgical
Altro Work Shops, Inc. ..... New York, N. Y.
Corbett-Cowley Co., Ltd. ..... Toronto, Ont., Can.
Dix & Sons Corp., Henry A. ..... New York, N. Y.
Eaton Co., Ltd., T. ..... Toronto, Ont., Can.
Marvin Co., E. W. ..... Troy, N. Y.
Neitzel Mfg. Co., Inc. ..... Waterford, N. Y.
Simpson Co., Ltd., Robert ..... Toronto, Ont., Can.
Williams & Co., C. D. ..... Philadelphia, Pa.

Supplies, Medical, Surgical, and Invalid
American Hospital Supply Corp. ..... Chicago, Ill.
Becton, Dickinson & Co. ..... Rutherford, N. J.
Eaton Co., Ltd., T. ..... Toronto, Ont., Can.
Hartz Co., Ltd., J. F. ..... Toronto, Ont., Can.
Hospital Import Corp. ..... New York, N. Y.
Johnson & Johnson, Inc. ..... New Brunswick, N. J.
Meinecke & Co. ..... New York, N. Y.
Ross, Inc., Will ..... Milwaukee, Wis.
Jamison Semple Co. ..... New York, N. Y.
Simpson Co., Ltd., Robert ..... Toronto, Ont., Can.
Stevens Companies, The ..... Toronto, Ont., Can.

Sutures
Davis & Geck, Inc. ..... Brooklyn, N. Y.
Deknatel & Son, J. A. ..... Long Island City, N. Y.
Ross, Inc., Will ..... Milwaukee, Wis.

Syringes
Becton, Dickinson & Co. ..... Rutherford, N. J.
Doniger & Co., Inc., S. ..... New York, N. Y.
Faichney Instrument Corp. ..... Watertown, N. J.
Fengel Corp., The ..... New York, N. Y.
Hospital Import Corp. ..... New York, N. Y.
Hygiene Products, Ltd. ..... Toronto, Ont., Can.
Ritter Dental Mfg. Co., Inc. ..... Rochester, N. Y.

Tables, Fracture and Orthopedic
Kny-Scheerer Corp., The ..... New York, N. Y.

Tables, Operating
Kny-Scheerer Corp., The ..... New York, N. Y.
Scanlan-Morris Co. ..... Madison, Wis.
Schoedinger, F. O. ..... Columbus, Ohio

Tables, Stainless Steel
Republic Steel Corp. ..... Massillon, Ohio

Thermometer Baskets
American Hospital Supply Corp. ..... Chicago, Ill.

Thermometers
Faichney Instrument Corp. ..... Watertown, N. Y.
Fengel Corp., The ..... New York, N. Y.
Hygiene Products, Ltd. ..... Toronto, Ont., Can.
Taylor Instrument Companies ..... Rochester, N. Y.

Do your cleaning methods need a major operation?

IT PAYS to keep check on your cleaning methods, to examine them searchingly every so often. Excessive time and effort spent in cleaning means that money is being wasted.

In such cases a major operation is indicated—the removal of time-consuming, expensive cleaning methods. And . . . for a quick, complete restoration of healthful efficiency adopt Oakite methods. For, Oakite assures absolute cleanliness at lowest cost whether the job is cleaning floors, walls, windows, porcelain and enamel fixtures, or laundering hospital linens.

Our nearest Service Man will be glad to go over with you the case histories of many hospitals that have reduced cleaning expenses the Oakite way. Write us and he will call. No obligation.

Oakite Service Men, cleaning specialists, are located in leading industrial centers of the U. S. and Canada

Manufactured only by
OAKITE PRODUCTS, INC., 16F Thames St., NEW YORK, N. Y.

OAKITE

TRADE MARK REG. U.S. PAT. OFF.

Industrial Cleaning Materials and Methods

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New plant opened May 1, 1928—the last word in Coffee production

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American Sterilizer Co. ..... Erie, Pa.
Castle Co., Wilmot ..... Rochester, N. Y.
Kny-Scheerer Corp., The ..... New York, N. Y.
Meinecke & Co. ..... New York, N. Y.
Scanlan-Morris Co. ..... Madison, Wis.

Water Bottles, Stopperless
Spaulding & Bros., A. G. ..... Brantford, Ont., Can.

X-ray Apparatus
Kelley-Koett Mfg. Co., Inc. ..... Covington, Ky.
General Electric X-ray Corp. ..... Chicago, Ill.
Ritter Dental Mfg. Co., Inc. ..... Rochester, N. Y.
Westinghouse X-ray Co. ..... Long Island City, N. Y.

X-ray Films and Supplies
Eastman Kodak Co. ..... Rochester, N. Y.
Eaton Co., Ltd., T. ..... Toronto, Ont., Can.

LAUNDRY EQUIPMENT AND SUPPLIES

Chutes, Soiled Linen
Pfaudler Co., The ..... Rochester, N. Y.

Dryers
American Laundry Machinery Co. ..... Cincinnati, Ohio
Smith, Drum & Co. ..... Philadelphia, Pa.
Troy Laundry Machinery Co., Inc. ..... East Moline, Ill.

Extractors
American Laundry Machinery Co. ..... Cincinnati, Ohio
Troy Laundry Machinery Co., Inc. ..... East Moline, Ill.
United States Hoffman Machinery Corp. ..... New York, N. Y.

Ironers
American Laundry Machinery Co. ..... Cincinnati, Ohio

Marking Equipment and Inks
Applegate Chemical Co. ..... Chicago, Ill.

Marking Labels
J. & J. Cash, Inc. ..... South Norwalk, Conn.

Presses
American Laundry Machinery Co. ..... Cincinnati, Ohio
Prosperity Co., Inc., The ..... Syracuse, N. Y.
Smith, Drum & Co. ..... Philadelphia, Pa.

Soaps
Colgate Palmolive Peet Co. ..... Chicago, Ill.

Trucks
Colson Co., The ..... Elyria, Ohio
Jarvis & Jarvis, Inc. ..... Palmer, Mass.

Tumblers
United States Hoffman Machinery Corp. ..... New York, N. Y.

Washers
American Laundry Machinery Co. ..... Cincinnati, Ohio
Troy Laundry Machinery Co., Inc. ..... East Moline, Ill.
United States Hoffman Machinery Corp. ..... New York, N. Y.

Washing Powders
Colgate Palmolive Peet Co. ..... Chicago, Ill.
Ford Sales Co., The J. B. ..... Wyandotte, Mich.
Procter & Gamble Co., The ..... Cincinnati, Ohio

FOOD SERVICE EQUIPMENT, UTENSILS, AND SUPPLIES

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Edison General Electric Appliance Co. ..... Chicago, Ill.
Hobart Mfg. Co., The ..... Troy, Ohio

Broilers
Savory, Inc. ..... Buffalo, N. Y.
Standard Gas Equipment Corp. ..... New York, N. Y.

Chinaware
American Hospital Supply Corp. ..... Chicago, Ill.
Eaton Co., Ltd., T. ..... Toronto, Ont., Can.
Herbst Corp., L. B. ..... Chicago, Ill.
Onondaga Pottery Co. ..... Syracuse, N. Y.
Ross, Inc., Will ..... Milwaukee, Wis.
Simpson Co., Ltd., Robert ..... Toronto, Ont., Can.

Choppers, Meat and Vegetable
Hobart Mfg. Co., The ..... Troy, Ohio

This advertisement is one of a series addressed to Hotel and Institutional Executives.

QUESTION:

Can one expect worthwhile savings in the storage of hospital laundry supplies?

ANSWER:

Decidedly so. Where facilities for storing supplies are poorly planned and distribution uncontrolled—there is serious waste. Proper storing prevents deterioration. It makes for orderliness. It saves time. Organized distribution checks extravagance.

Of the three major classifications of laundry supplies (washing materials, such as soaps and starch; miscellaneous plant, such as nets, paper, padding, and office, such as stationery and laundry lists) washing materials bulk largest, therefore, suggesting that the storage room be placed close to the washroom to eliminate handling. It is recommended that access to the storeroom be controlled, involving a system of responsibility and records to insure using the correct amount of supplies and to stop waste.

In many instances supplies cannot be obtained locally on short notice. Again, large quantities are often purchased to secure a price advantage. Thus adequate storage space should be provided—having good ventilation and dry flooring. If the three classifications are maintained in the same storeroom, each should be separated by partitions.

Troy Advisory Service with its staff of experienced laundry engineers has a wealth of information on this and other laundry problems. Make use of it, it is yours for the asking. A card to any of the offices below will bring you this data at once.

TROY LAUNDRY MACHINERY CO., INC.

Chicago ➝ New York ➝ San Francisco ➝ Seattle ➝ Boston ➝ Los Angeles. Factories: East Moline, Ill.

JAMES ARMSTRONG & CO., Ltd., European Agents: London ➝ Berlin ➝ Zurich

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Troy Equipped Laundry in the Cedar of Lebanon Hospital, Los Angeles, California

Coffee Mills
Hobart Mfg. Co., The ..... Troy, Ohio

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Edison General Electric Appliance Co ..... Chicago, Ill.

Cutters, Butter
Adt Co., The John B ..... Baltimore, Md.

Cutters, Food
Hobart Mfg. Co., The ..... Troy, Ohio

Dinnerware
Beetleware Corp ..... New York, N. Y.
Jamison Semple Co ..... New York, N. Y.

Dishwashing Machines
Blakeslee & Co., G. S ..... Chicago, Ill.
Colt's Patent Fire Arms Mfg. Co ..... Hartford, Conn.
Crescent Dishwasher Div., Hobart Mfg. Co ..... Troy, Ohio

Dispensers, Milk and Cream
Lyons Sanitary Urn Co ..... New York, N. Y.

Electrical Equipment, Complete Line
Edison General Electric Appliance Co ..... Chicago, Ill.

Food Conveyors
Colson Co., The ..... Elyria, Ohio

Food (Hot) Preserving Cabinets
Waters Genter Co ..... Minneapolis, Minn.

Glass Washing Machines
Blakeslee & Co., G. S ..... Chicago, Ill.
Colt's Patent Fire Arms Mfg. Co ..... Hartford, Conn.
Crescent Dishwasher Div., Hobart Mfg. Co ..... Troy, Ohio

Glassware
Herbst Corp., L. B ..... Chicago, Ill.
Libbey Glass Mfg. Co ..... Toledo, Ohio
Ross, Inc., Will ..... Milwaukee, Wis.

Ice Cubers, Crushers, and Shavers
Blakeslee & Co., G. S ..... Chicago, Ill.

Kitchen Equipment, Complete Line
Eaton Co., Ltd., T ..... Toronto, Ont., Can.
Simpson Co., Ltd., Robert ..... Toronto, Ont., Can.
Standard Gas Equipment Corp ..... New York, N. Y.
Wrought Iron Range Co., Ltd ..... Toronto, Ont., Can.

Mixing Machines
Hobart Mfg. Co., The ..... Troy, Ohio

Monel Metal for Fabrication
International Nickel Co., Inc., The ..... New York, N. Y.

Ovens
Edison General Electric Appliance Co ..... Chicago, Ill.
Standard Gas Equipment Corp ..... New York, N. Y.

Pasteurizers, Milk
Pfaudler Co., The ..... Rochester, N. Y.

Peelers
Hobart Mfg., Co., The ..... Troy, Ohio
Blakeslee & Co., G. S ..... Chicago, Ill.

Pitchers, Individual Ice
Hospital Import Corp ..... New York, N. Y.

Ranges
Standard Gas Equipment Corp ..... New York, N. Y.

Silver Burnishing Machines
American Laundry Machinery Co ..... Cincinnati, Ohio
Eaton Co., Ltd., T ..... Toronto, Ont., Can.
Herbst Corp., L. B ..... Chicago, Ill.
Ross, Inc., Will ..... Milwaukee, Wis.
Simpson Co., Ltd., Robert ..... Toronto, Ont., Can.
Thorner Brothers ..... New York, N. Y.

Slicing Machines
Blakeslee & Co., G. S ..... Chicago, Ill.
Hobart Mfg. Co., The ..... Troy, Ohio

Steamer-roasters
Erie Restaurant Equipment Co ..... Erie, Pa.

Tables, Stainless Steel
Republic Steel Corp ..... Massillon, Ohio

Toasters
Edison General Electric Appliance Co ..... Chicago, Ill.
Savory, Inc. ..... Buffalo, N. Y.
Waters Genter Co ..... Minneapolis, Minn.

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A Latex Product

The New Surgeon Glove

Developed in the laboratory of The Wilson Rubber Company under U. S. Patent No. 1719633.

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Colson Co., The ..... Elyria, Ohio
Jarvis & Jarvis, Inc. ..... Palmer, Mass.

Utensils, Stainless
Allegheny Steel Co. ..... Brackenridge, Pa.
International Nickel Co., Inc., The ..... New York, N. Y.
Metal Craft, Ltd. ..... Grimsby, Ont., Can.

Urns, Coffee
Amcoin Corp. ..... New York, N. Y.

Urns, Milk and Cream
Lyons Sanitary Urn Co. ..... New York, N. Y.

Waste Receptacles
Tidy Products, Inc. ..... New York, N. Y.

FOODS AND BEVERAGES

Baking Powder
General Foods Corp. ..... New York, N. Y.

Beverages
Davies & Sullivan Co. (coffee and tea) ..... New York, N. Y.
Davis Co., R. B. (cocomalt) ..... Hoboken, N. J.
General Foods Corp. (postum and coffee) ..... New York, N. Y.
Horlick's Malted Milk Corp. (malted milk) ..... Racine, Wis.
Kellogg Co. (coffee) ..... Battle Creek, Mich.
Seidel & Sons, Ad. (dry) ..... Chicago, Ill.
Sexton & Co., John (coffee and tea) ..... Chicago, Ill.
Silverwood's Dairies, Ltd. (milk, fresh and powdered) ... Toronto, Ont., Can.
Vi-Tone Co. (soya bean) ..... Hamilton, Ont., Can.

Bread (Health)
Western Canada Flour Mills Co., Ltd. ..... Toronto, Ont., Can.

Cereals
General Foods Corp. ..... New York, N. Y.
Kellogg Co. ..... Battle Creek, Mich.

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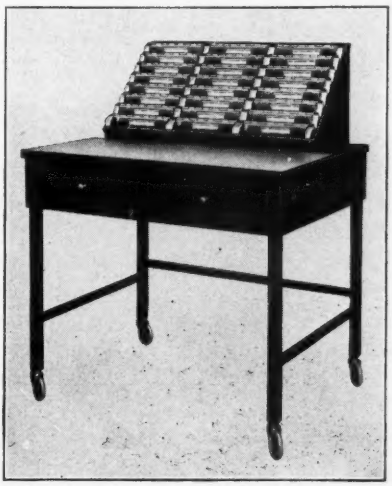

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California

Le Grand.—The new isolation unit of the County Hospital, which has just been completed and is ready for the reception of patients, will be used exclusively for patients suffering from contagious diseases. It will not be restricted to the care of indigent patients.

Illinois

Aurora.—The Rt. Rev. Edward F. Hoban, D.D., Bishop of Rockford, dedicated the new $500,000 St. Joseph Mercy Hospital at Aurora on Sunday, September 20.

Des Plaines.—The new Northwestern Hospital was opened Tuesday, September 1. Miss Grace Mjelde is superintendent.

Maryland

Baltimore.—Plans for the new nurses' home at the University of Maryland Hospital have been approved. Mr. Horace Trumbauer of Philadelphia is the architect. Construction will be started immediately.

Massachusetts

Southbridge.—The Harrington Memorial Hospital was officially opened Monday, September 7.

Minnesota

Minneapolis.—Construction of the new $600,000 building at St. Barnabas Hospital will be started at an early date. Mr. C. H. Johnston, St. Paul architect, is preparing the plans.

Oak Terrace.—The new wing of the Glen Lake Sanatorium, which is the gift of the Citizen's Aid Society of Minneapolis, was formally dedicated Saturday, August 29. A feature of the dedication was the annual home-coming celebration when discharged patients from this fine tuberculosis sanatorium returned as guests of the institution. Dr. E. S. Mariette is the director.

Missouri

Independence.—The new $500,000 Community Hospital is being completed. This sum has been appropriated for the building and equipping of this hospital. Mr. Henry C. Smith of Independence is the architect.

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Kansas City.—The new Menorah Hospital received its first patient on September 7. Miss Beryl B. Anscombe is superintendent of this institution, which has just been completed.

New York

Gloversville.—Through the gift of Mr. Lucius Littauer, the Eugene Littauer Memorial laboratory, a $300,000 structure, has just been completed and added to the Nathan Littauer Hospital group. The building is three stories in height and contains not only bacteriological but histological and research laboratories in addition to many other facilities generally found only in the largest hospitals in the country.

North Carolina

Elkin.—The Hugh Chatham Memorial Hospital was dedicated by Bishop Edwin Mouzon on September 6.

North Dakota

Belcourt.—The new Government Hospital established to provide free medical care for all Indian wards on the reservation has been completed and is ready for the reception of patients. The hospital is built in three wings: the left wing is devoted to the care of tuberculous patients, the right wing serves as a home for nurses, and the middle wing is used as a general hospital.

Jamestown.—Bids have been advertised for the completion of a new hospital to cost $150,000.

Oklahoma

Alva.—The city of Alva has engaged E. J. Peters, architect, to prepare plans for a new city hospital.

Tulsa—The city of Tulsa has let the contract for the construction of a negro hospital to cost $55,800.

Pennsylvania

Carbondale.—Contract for the new Carbondale General Hospital has been awarded and construction work started early in September.

Danville.—The Danville State Hospital has launched a building program to complete which the sum of $430,000 will be expended. This amount was appropriated for this purpose in the 1931 session of the state legislature. The new buildings included in the program are: a clinic and diagnostic building, a ward building for one hundred women patients, a home for fifty nurses, and cottages for the chief engineer and physicians and their families.

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Philadelphia.—Contract for the new Wills Eye Hospital was awarded early in September and construction started. It will be seven stories in height and will be used exclusively for the treatment and care of patients suffering from diseases of the eye. The original Wills Eye Hospital stood for nearly a century at 18th and Race Streets.

Pittsburgh.—Governor Pinchot has announced that Pennsylvania will have a psychopathic hospital as a center for leadership in training physicians, nurses, and other persons for intensive study of mental diseases and for research. When the hospital is established it will be affiliated with the University of Pittsburgh. The legislative appropriation has been granted to start the preliminary work.

South Dakota

Belle Fourche.—The contract has been let for the construction of the John Burns Memorial Hospital. The hospital is being built by Dr. J. L. Townsend of Sioux City, in conformance with the provisions of the will of John Burns, a former patient, who left property valued at $100,000 for the purpose of establishing this institution. Mr. Burns specified in his will that Dr. Townsend should be superintendent of the hospital.

Virginia

Richmond.—The new nurses' home of the Stuart Circle Hospital was completed and ready for occupancy on September 1. The home provides forty-two single rooms and sixteen double rooms for student nurses, rooms for eight graduates, and suites for the matron and the superintendent, together with reception hall, recreation hall, library, and infirmary. Miss Charlotte Pfeiffer, superintendent, advises that the hospital has approved the construction of a new heating plant and that the work has already been started.

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Sister Mary Beniti, formerly superintendent of St. John's Hospital of Anderson, Indiana, assumed charge of St. Mary's at South Bend on August 26. Sister Mary James has been appointed to succeed Sister Beniti at St. John's Hospital.

Dr. J. H. Pound has been appointed superintendent of the Florida Hospital for the Insane at Chattahoochee to succeed Dr. James Q. Folmar, who died recently.

The Lewis County General Hospital at Lowville, New York, has named Lucy J. Johnson as its superintendent.

Mrs. Margaret Donaldson, who for the past two years has been superintendent of the Memorial Hospital, Mount Pleasant, Iowa, tendered her resignation effective October 1.

Mr. L. M. Bowen, formerly of Portland, Oregon, has been appointed manager of the Hinsdale Sanitarium, Hinsdale, Illinois.

Miss Elsie Florence Mattson of Detroit has been appointed superintendent of the Saginaw County Contagious Disease Hospital, Saginaw, Michigan, effective September 1.

Miss Miranda Maxwell has succeeded Miss Hattie M. Thomas as superintendent of the Lamar County Hospital, Paris, Texas.

Dr. Crum Epler has been appointed director of the Woodcroft Hospital, Pueblo, Colorado.

Mr. V. W. Olney, who for the past several years has been superintendent of the French Hospital, San Francisco, has been appointed superintendent of St. Francis Hospital to succeed Dr. L. B. Rogers.

THE BULLETIN was in error in stating that Mr. Earl R. Chandler had resigned the superintendency of Columbia Hospital, Milwaukee, Wisconsin. Mr. Chandler was appointed superintendent of Columbia Hospital in October, 1929 and his intentions are to remain indefinitely in that position.

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Delaware

Millville.—Under the will of the late Edward W. Pyle $1,000,000 was bequeathed for the construction of a hospital or home for children in Delaware. Of this amount, $200,000 has been set aside for an endowment fund for the perpetual maintenance of the institution.

Illinois

Princeton.—The Perry Memorial Hospital has received $15,000 under the will of Mr. James W. Kimball.

Indiana

Batesville.—Under the terms of the will of Mrs. Margaret Hillenbrand, who died in 1929, the sum of $60,000 was set aside for the construction and maintenance of a hospital for Batesville and the surrounding community, providing this amount was matched by a similar amount not later than February 2, 1932. Mrs. Hillenbrand's daughter, Mrs. Mary Mitchell, has added to the bequest of her mother the sum of $75,000, to complete the amount which it has been estimated the new institution will cost. The administration of this new hospital will be in the hands of the Sisters of the Poor of St. Francis.

Michigan

Marquette.—The St. Luke's Hospital has received $60,000 for endowment and $40,000 to be used for the erection of a nurses' home by the will of Miss Margaret Wallace.

Missouri

Kansas City.—The women's auxiliary of Menorah Hospital, Mrs. Alvin Lorie, president, has given $10,000 to be used for the purchase of radium for that institution.

New York

Brooklyn.—Dr. John Osborne Polak, who died recently, left $350,000 to the Long Island College Hospital. Of this sum $100,000 is for the erection of a science laboratory, and $250,000 for a private patient building for maternity and gynecological cases.

Rhode Island

Newport.—At the annual meeting of the Newport Hospital it was announced that Lewis Cass Ledyard had given $500,000 to the hospital as a memorial to his father, Henry Ledyard, who was first president of the hospital and long a member of the hospital board. This benefaction is to be added to the endowment fund of the hospital.

ANNUAL REPORTS

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